

# I-81 VIADUCT PROJECT - PHASE 1, CONTRACT 2

PIN 3501.91, Contract D900056

# DB CONTRACT DOCUMENTS REQUEST FOR PROPOSALS

PART 7
ENGINEERING DATA
(PART 5 OF 5)

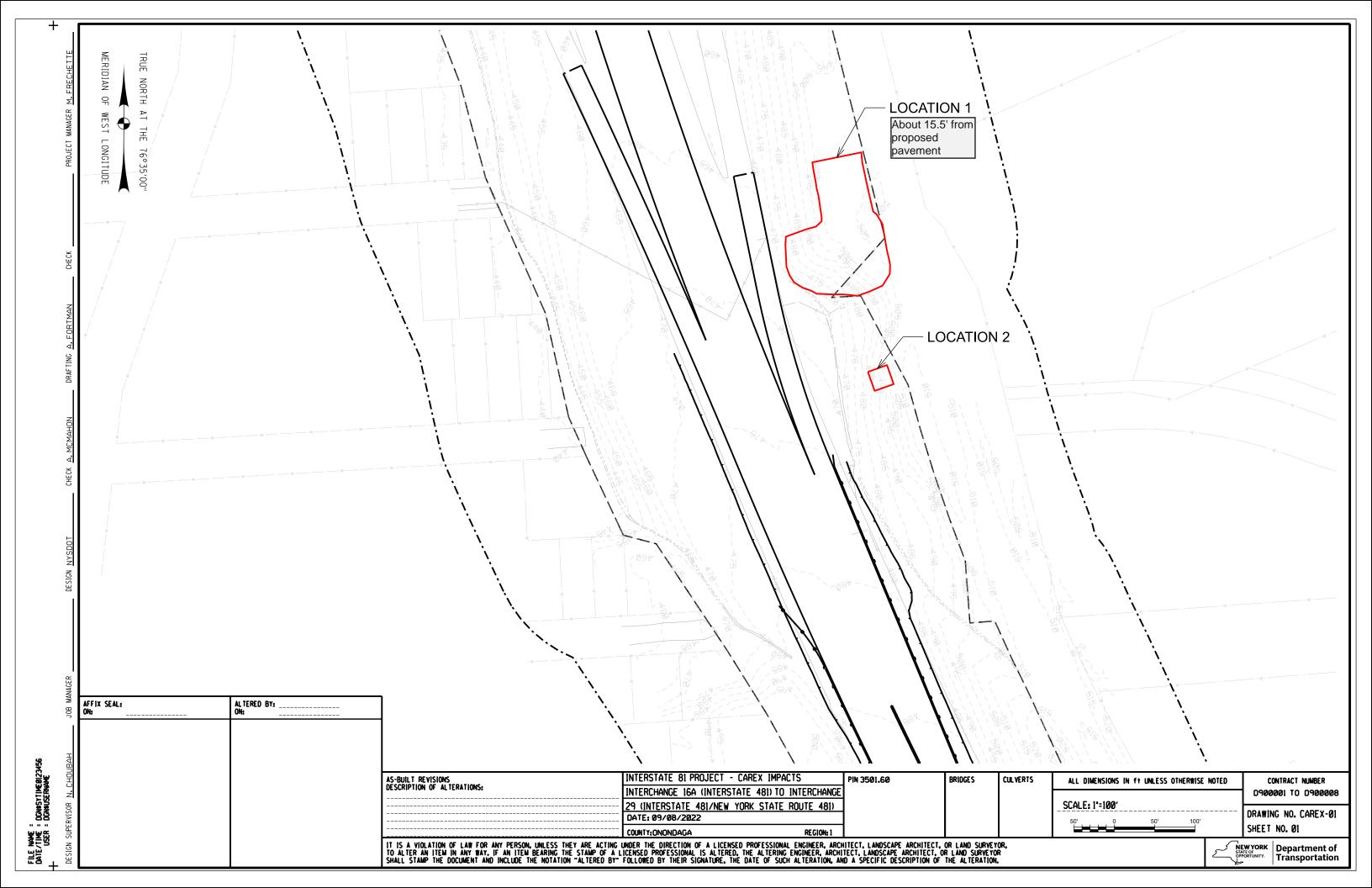
Draft October 19, 2022

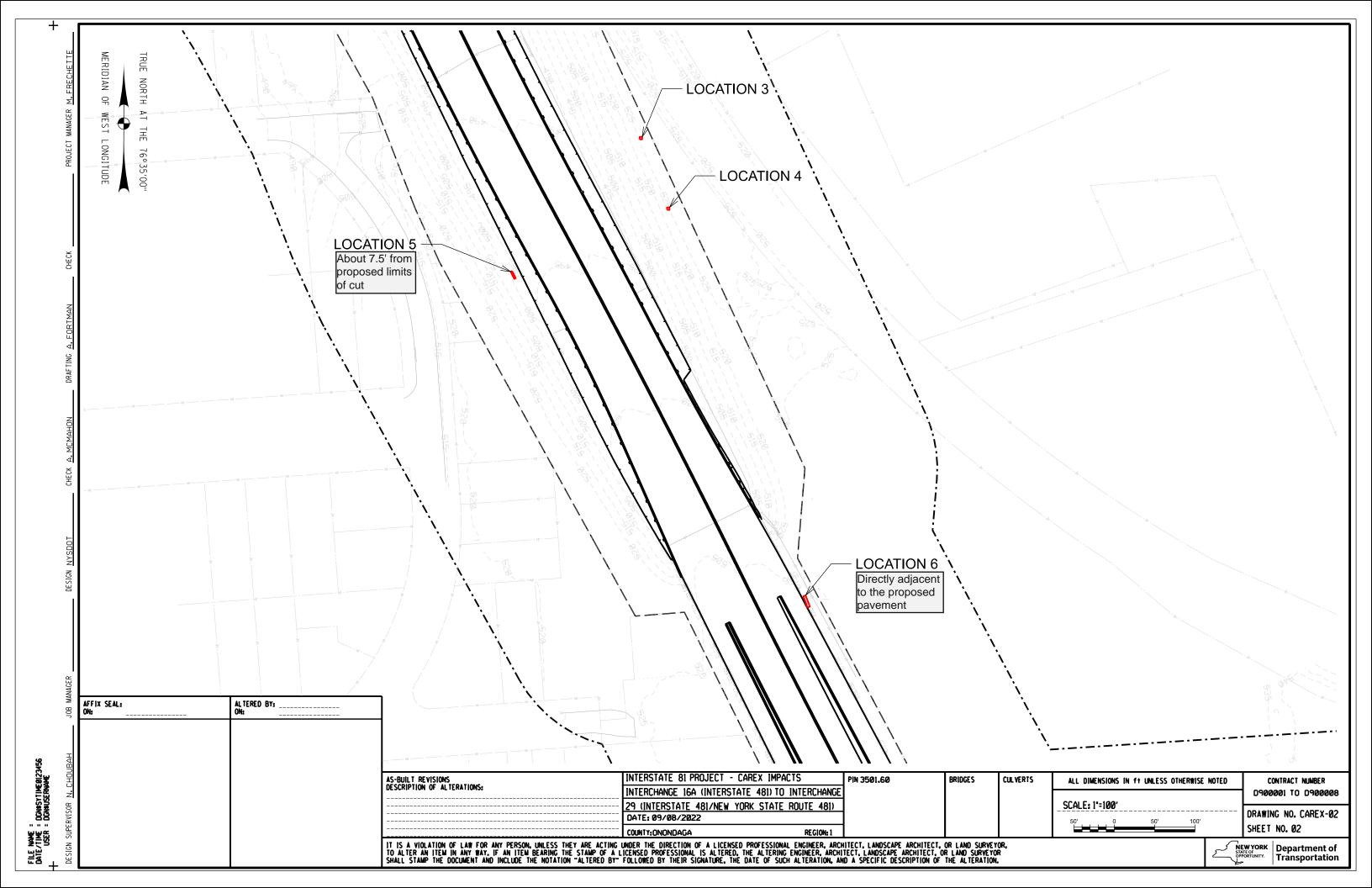
#### **ENGINEERING DATA**

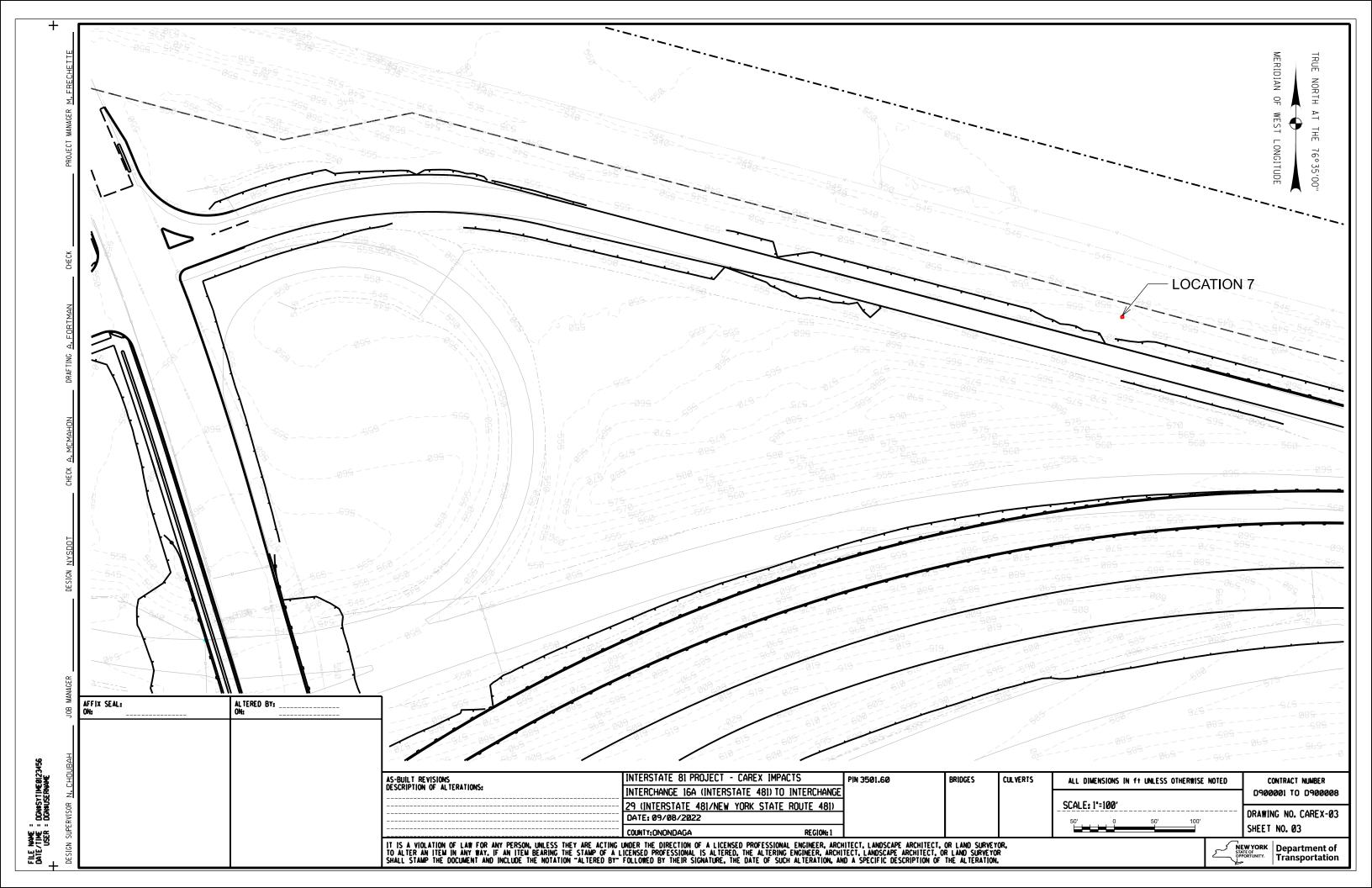
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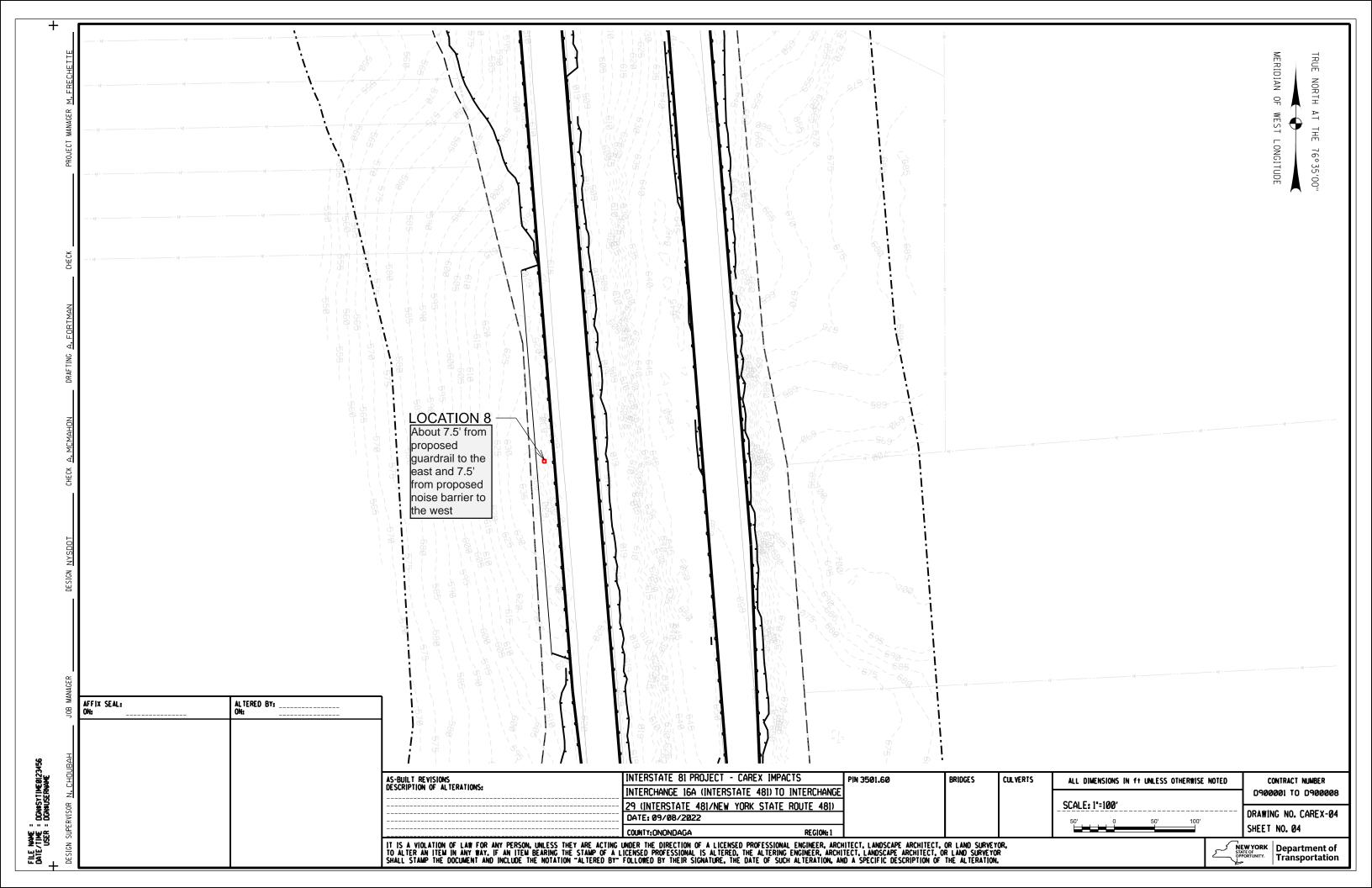
CAREX IMPACT
WATER RESOURCE MITIGATION
ROW ACQUISITION MAPS
HIGHWAY BOUNDARY PLANS
STRUCTURAL DETAILS
HAZARDOUS WASTE CONTAMINATED MATERIALS ADDITIONAL INFORMATION
NON-STANDARD FEATURE JUSTIFICATIONS AND DESIGN CRITERIA TABLES
STAGING AREA PLANS

# **Carex Impact**



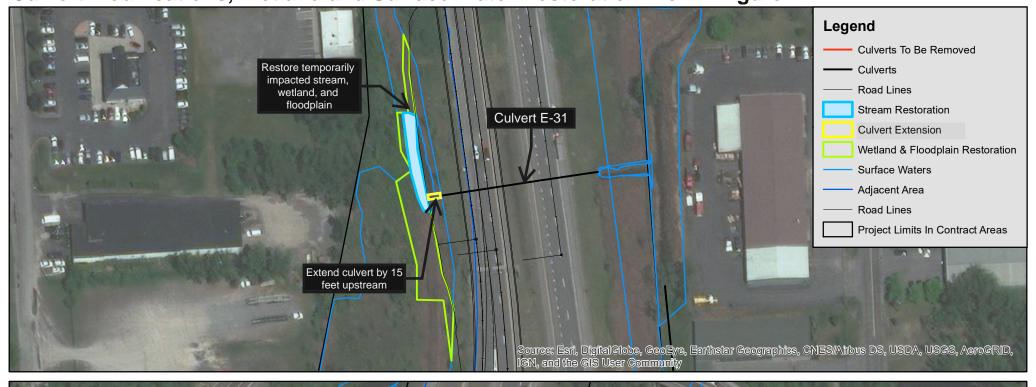


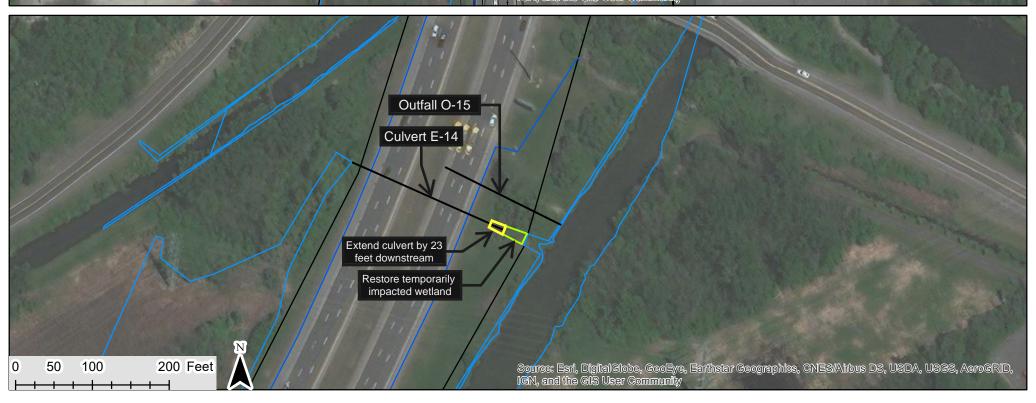




# **Water Resource Mitigation**

# Culvert Modifications, Wetland and Surface Water Restoration Work - Figure 1





Culvert Modifications, Wetland and Surface Water Restoration Work - Figure 2 Legend Culverts **Culvert and Outfall Modifications** Outfall O-16 Stream Restoration Wetland & Floodplain Restoration - I-481 Exit 3 Interchange Alignment Extend outfall by 8 **Surface Waters** feet to the East Restore temporarily impacted wetland Restore temporarily impacted wetland Outfall O-17 Extend outfall by 16 Extend outfall by 5 feet upstream feet to the East Restore temporarily impacted wetland Culvert E-10 Outfall O-18 Extend outfall by 5 feet to the East

> Source: Esri, Digital Globe, Geo Eye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS

AeroGRID, IGN, and the GIS User Communit

200 Feet

Restore temporarily impacted wetland

Source: Esri, Digital Globe, Geo Eye, Earthstar Geographics, CNES//Airbus DS, USDA, USGS.

AeroGRID, IGN, and the GIS User Community

	Water Resource Mitigation				
General Ecology - Culverts	Action Summary	NYSDOT Standard Specifications	Description of Work		
Outfall O-16 (Outfall E-8)*	Outfall extension	Section 206 Trench, Culvert, and Structure Excavation	Extend outfall 8 feet to the east. NYSDEC specifies that rip rap shall be used as head wall protection to prevent scouring around the outlet of the culvert.		
Outfall O-17 (Outfall E-9)*	Outfall extension	Section 206 Trench, Culvert, and Structure Excavation	Extend outfall 5 feet to the east. NYSDEC specifies that rip rap shall be used as head wall protection to prevent scouring around the outlet of the culvert.		
Outfall O-18 (Outfall E-10)*	Outfall extension	Section 206 Trench, Culvert, and Structure Excavation	Extend outfall 5 feet to the east. NYSDEC specifies that rip rap shall be used as head wall protection to prevent scouring around the outlet of the culvert.		
Culvert E-10*	Culvert extension	Section 206 Trench, Culvert, and Structure Excavation, Special spec 553.010001 Coffer Dam	Extend culvert 16 feet into the upstream wetland area. NYSDEC specifies that rip rap shall be used as head wall protection to prevent scouring around the inlet of the culvert.		
Culvert E-14	Culvert extension	Section 206 Trench, Culvert, and Structure Excavation, Special spec 553.010001 Coffer Dam	Extend culvert 23 feet into the downstream wetland area. The extended culvert outfall shall include an energy dissipator or similar to protect the streambed downstream of the culvert from erosion.		
Culvert E-31	Culvert extension	Section 206 Trench, Culvert, and Structure Excavation, Special spec 553.010001 Coffer Dam	Extend culvert by 15 feet into the upstream wetland area. NYSDEC specifies that rip rap shall be used as head wall protection to prevent scouring around the inlet of the culvert.		

\*Outfall E-8, Outfall E-9, and Outfall E-10 were referenced as such in the Final Environmental Impact Statement. They have since been renamed to Outfall O-16, Outfall O-17, and Outfall O-18 as shown on **Figures 1** and **2**.

# **ROW Acquisition Maps**

Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

### **NEW YORK STATE** DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street

F.I.C. 64-7 PIN 3501.98

PREPARED BY \_\_\_

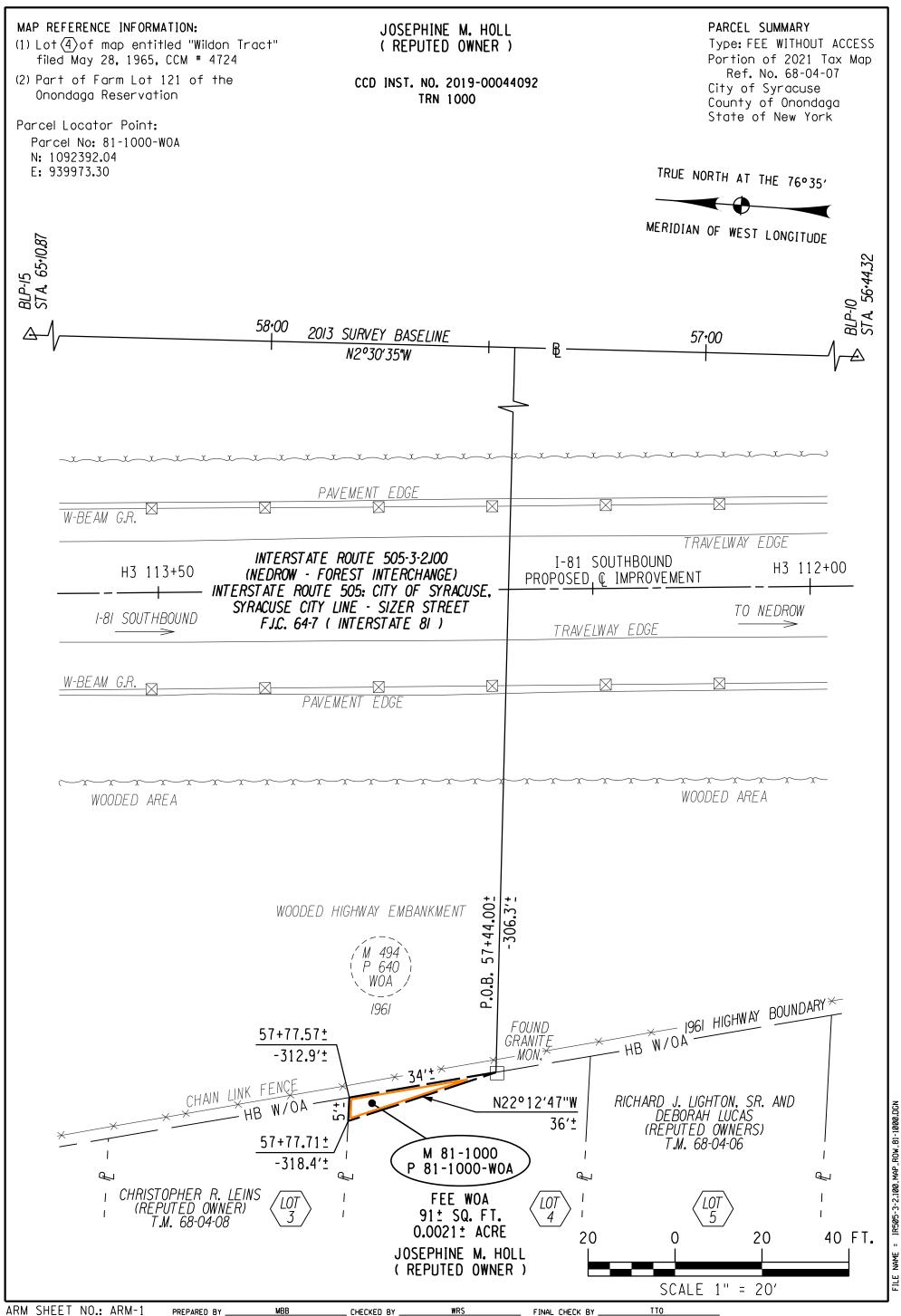
MBB

CHECKED BY \_\_\_\_

WRS

FINAL CHECK BY \_

MAP NO. 81-1000 PARCEL NO. 81-1000-WOA SHEET 1 OF 2 SHEETS



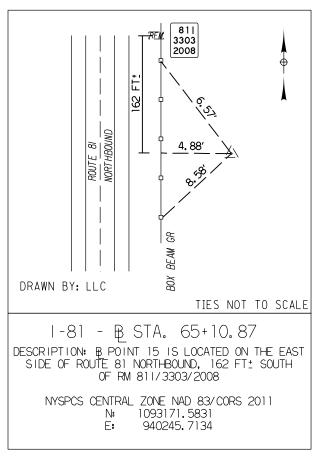
Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

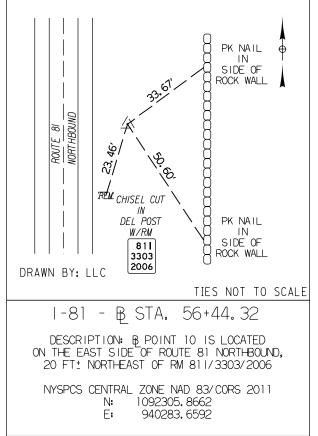
### NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1000 PARCEL NO. 81-1000-WOA SHEET 2 OF 2 SHEETS





All that piece or parcel of property designated as Parcel No. 81-1000-WOA, as shown on the accompanying map, to be acquired in Fee, without right of access to and from abutting property.

SUBJECT TO utility easements and right-of-ways of record heretofore conveyed affecting the above described property.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

AUGUST 5, 2021

George A. Doucette, Jr., P.E.

for the Regional Director of Transportation

Regional Design Engineer Region No. 3



"Unauthorized alteration of a survey map bearing a licensed land surveyor's seal is a violation of the New York State Education Law."

I hereby certify that this map was prepared in accordance with current NYSDOT policies, standards and procedures.

JUL<u>Y 26, 20 21</u>

Popli Design Group

By: Timothy T. Odell, Land Surveyor P.L.S. License No. 50995

#### JOSEPHINE M. HOLL ( REPUTED OWNER )

Map of property which the Commissioner of Transportation deems necessary to be acquired by appropriation in the name of the People of the State of New York in fee, without right of access to and from abutting property, except for the purposes of the rights described above, for purposes connected with the highway system of the State of New York pursuant to Sections 30 and 340-B of the Highway Law and the Eminent Domain Procedure Law.

There is excepted from this appropriation all the right, title and interest, if any, of the United States of America in or to said property.

Pursuant to the statute(s) set forth above and the authority delegated to me by Official Order of the Commissioner of Transportation, this acquisition map is hereby approved and filed in the main office of the New York State Department of Transportation.

I have compared the foregoing copy of the map with the original thereof, as filed in the Office of the State Department of Transportation, and I do hereby certify the same to be a true and correct copy of the original and the whole thereof.

Date.	20	
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Office of Right-of-Way

REPARED BY	MBB	CHECKED BY	WRS	EINAL CHECK BY	TTO	

, Office of Right-of-Way

ARM SHEET NO.: ARM-1

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FINAL CHECK BY \_\_\_

TTO

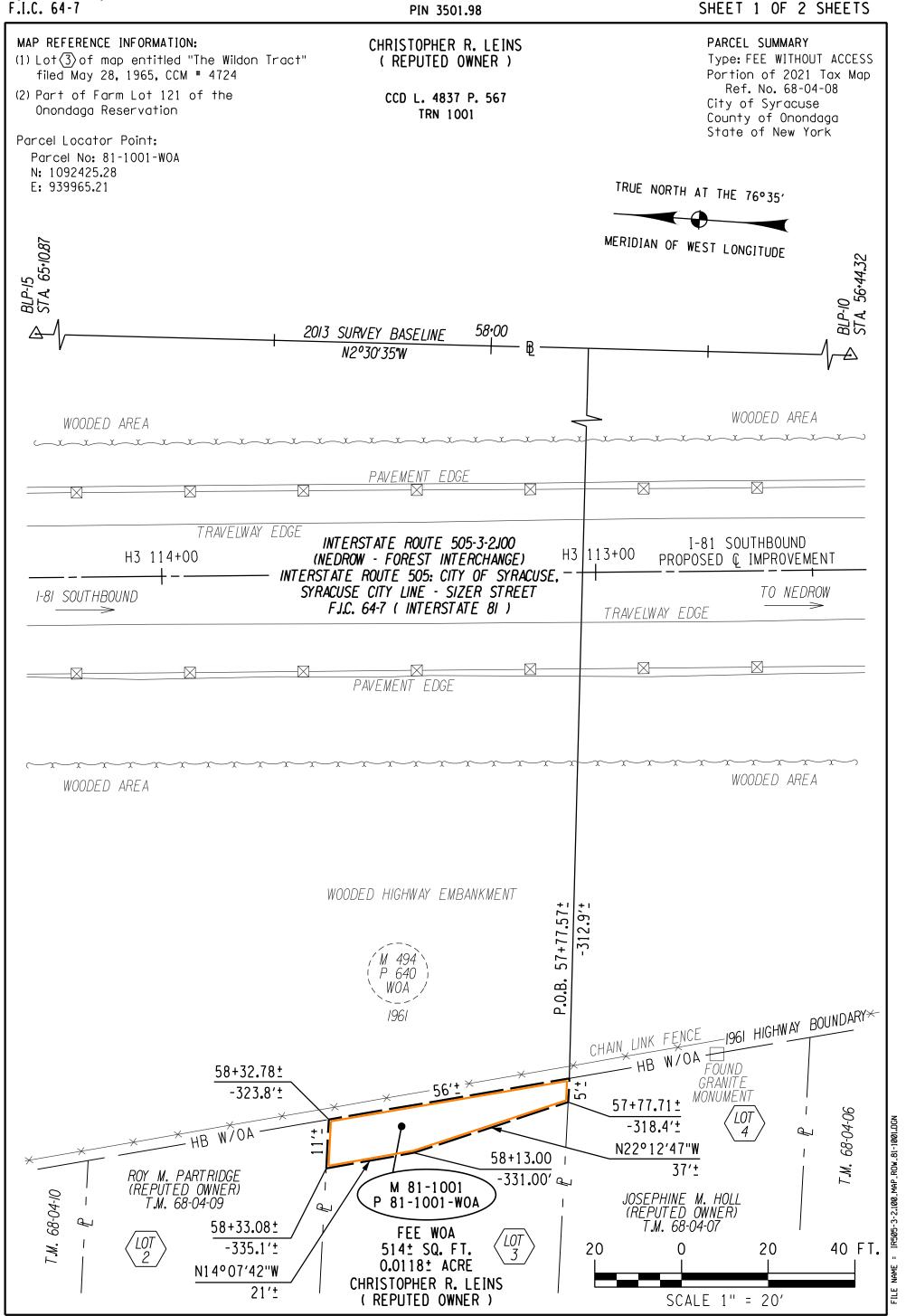
Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

## **NEW YORK STATE** DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street

PIN 3501.98

MAP NO. 81-1001 PARCEL NO. 81-1001-WOA SHEET 1 OF 2 SHEETS



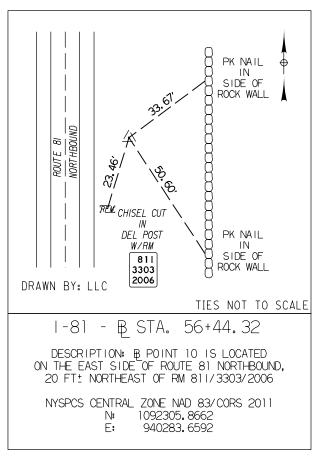
#### NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

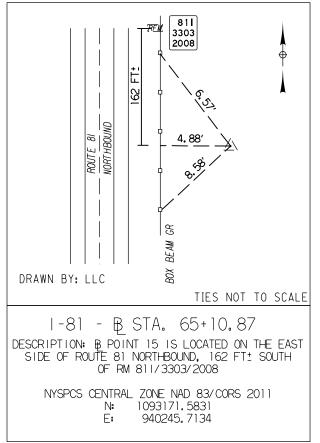
(Nedrow - Forest Interchange)

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1001 PARCEL NO. 81-1001-WOA SHEET 2 OF 2 SHEETS





All that piece or parcel of property designated as Parcel No. 81-1001-WOA, as shown on the accompanying map, to be acquired in Fee, without right of access to and from abutting property.

SUBJECT TO utility easements and right-of-ways of record heretofore conveyed affecting the above described property.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

AUG<u>UST</u> 5, 20 21

George A. Doucette, Jr., P.E.

Regional Design Engineer for the Regional Director of Transportation Region No. 3

OF

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JUL<u>Y 26, 20 21</u>

Popli Design Group

By: Timothy T. Odell, Land Surveyor P.L.S. License No. 50995

#### CHRISTOPHER R. LEINS ( REPUTED OWNER )

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Office of Right-of-Way

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, Office of Right-of-Way

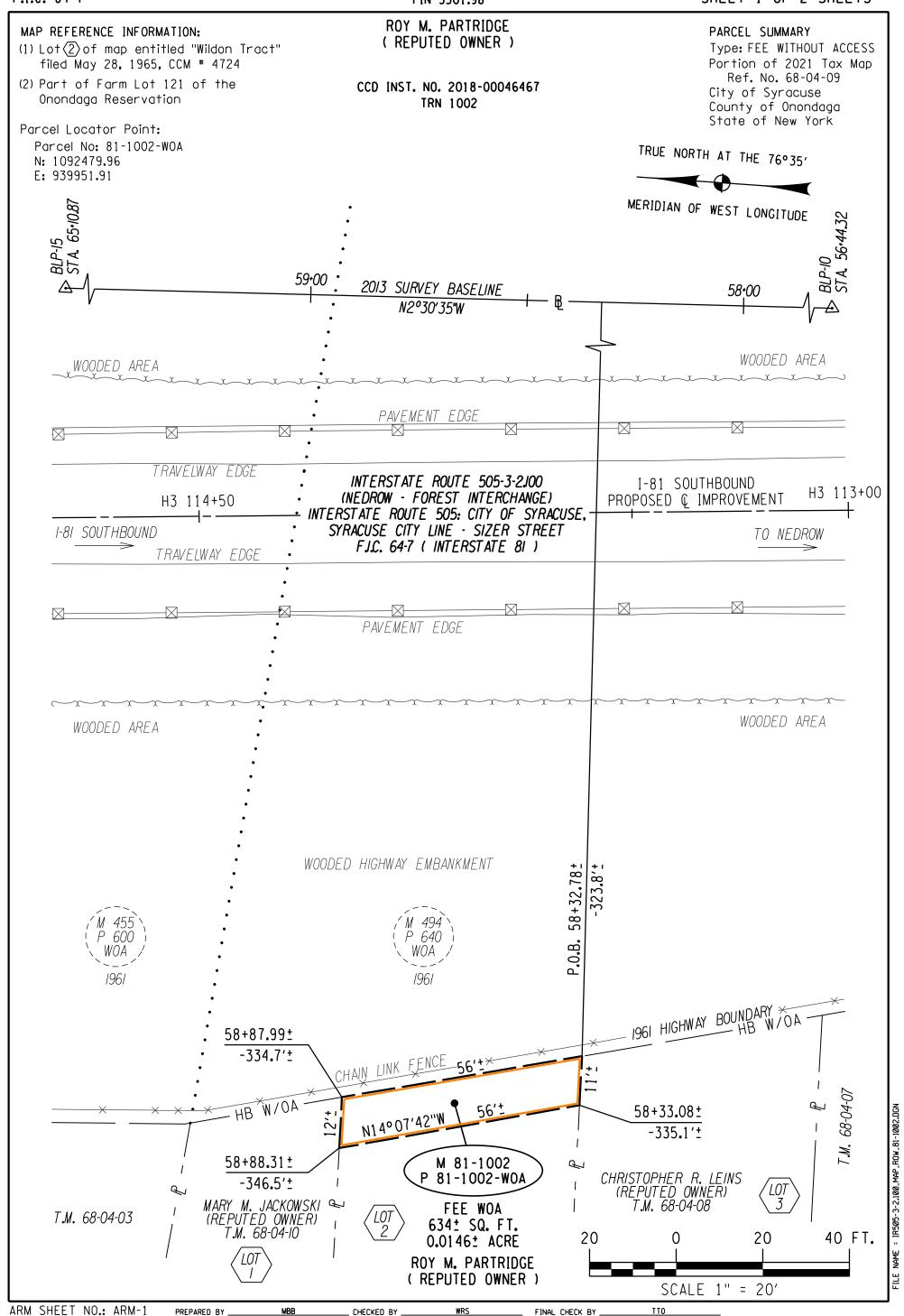
Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

# NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1002 PARCEL NO. 81-1002-WOA SHEET 1 OF 2 SHEETS



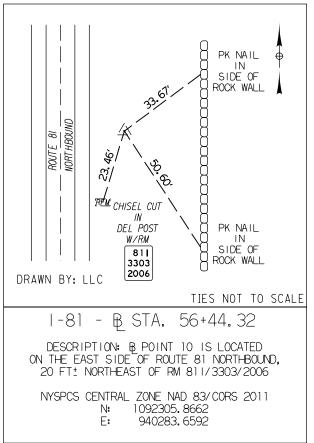
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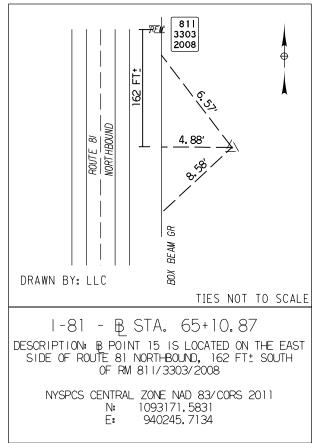
Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street F.I.C. 64-7

NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

PIN 3501.98

MAP NO. 81-1002 PARCEL NO. 81-1002-WOA SHEET 2 OF 2 SHEETS





All that piece or parcel of property designated as Parcel No. 81-1002-WOA, as shown on the accompanying map, to be acquired in Fee, without right of access to and from abutting property.

SUBJECT TO utility easements and right-of-ways of record heretofore conveyed affecting the above described property.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

AUGUST 5, 20 21

George A. Doucette, Jr., P.E.

Regional Design Engineer for the Regional Director of Transportation

Region No. 3



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JUL Y 26, 20 21

Popli Design Group

By: Timothy T. Odell, Land Surveyor P.L.S. License No. 50995

#### ROY M. PARTRIDGE ( REPUTED OWNER )

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, Office of Right-of-Way

Office of Right-of-Way

MBB WRS \_\_ Final Check by \_\_\_\_\_ TTO PREPARED BY \_\_\_\_ \_\_ CHECKED BY \_\_\_\_

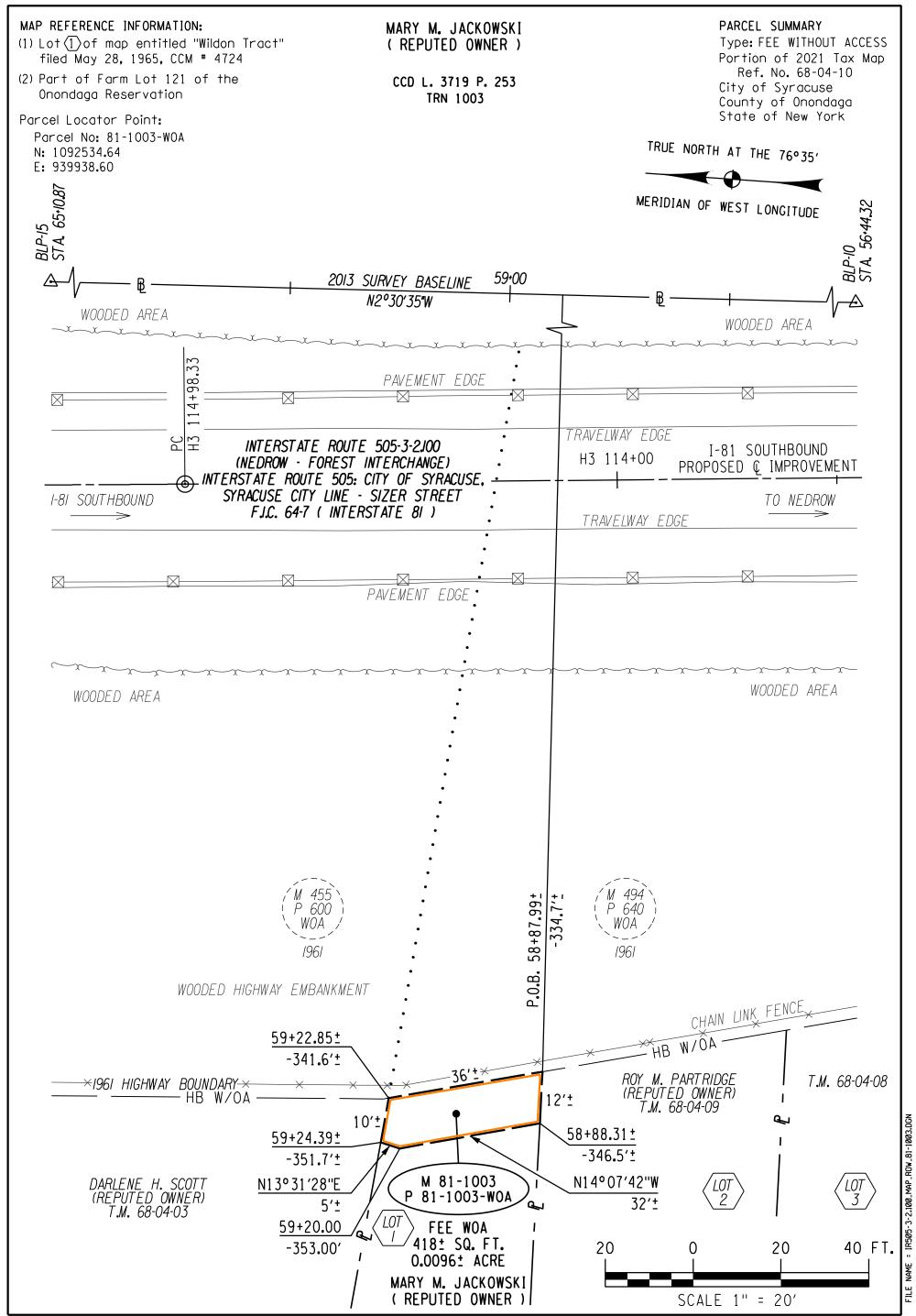
Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

# NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1003 PARCEL NO. 81-1003-WOA SHEET 1 OF 2 SHEETS



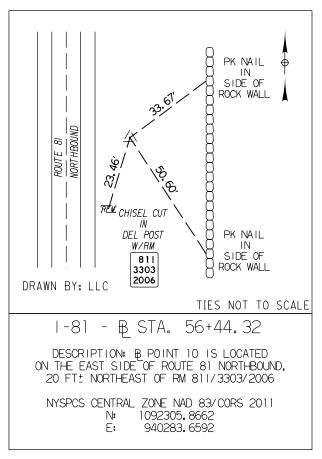
#### NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

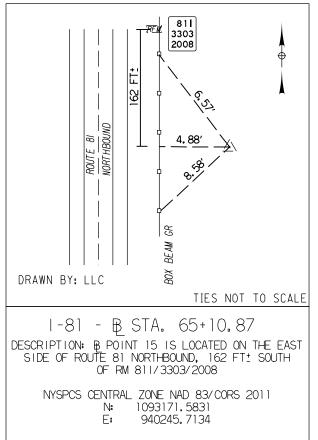
(Nedrow - Forest Interchange) Interstate Route 505: City of Syracuse,

Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1003 PARCEL NO. 81-1003-WOA SHEET 2 OF 2 SHEETS





All that piece or parcel of property designated as Parcel No. 81-1003-WOA, as shown on the accompanying map, to be acquired in Fee, without right of access to and from abutting property.

SUBJECT TO utility easements and right-of-ways of record heretofore conveyed affecting the above described property.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

AUGUST 5, 20 21

George A. Doucette, Jr., P.E.

for the Regional Director of Transportation

Regional Design Engineer Region No. 3



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JUL Y 26, 20 21

Popli Design Group

By: Timothy T. Odell, Land Surveyor P.L.S. License No. 50995

#### MARY M. JACKOWSKI ( REPUTED OWNER )

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PREPARED BY \_\_\_\_

MBB

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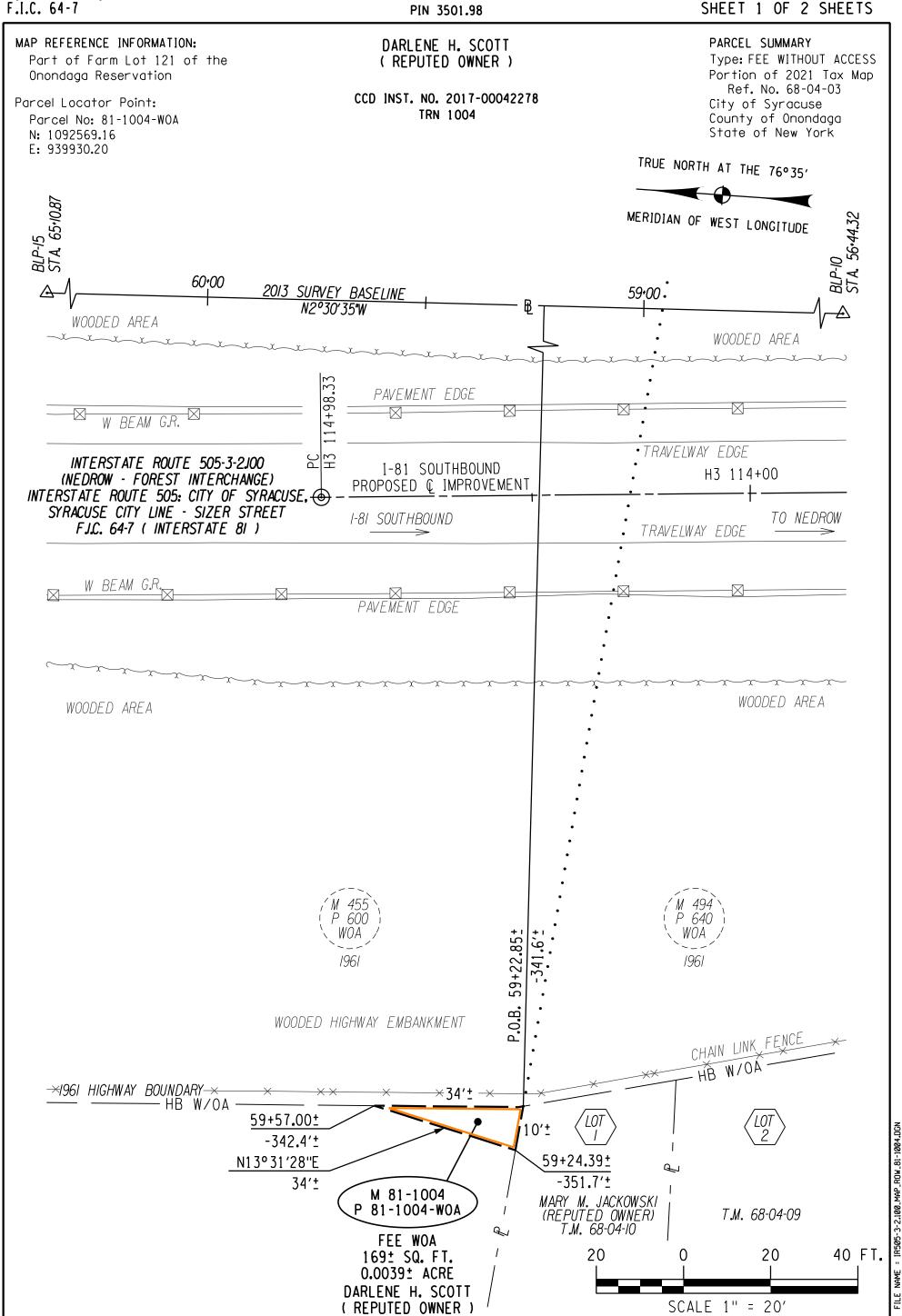
Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

## NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse. Syracuse City Line - Sizer Street

PIN 3501.98

MAP NO. 81-1004 PARCEL NO. 81-1004-WOA SHEET 1 OF 2 SHEETS



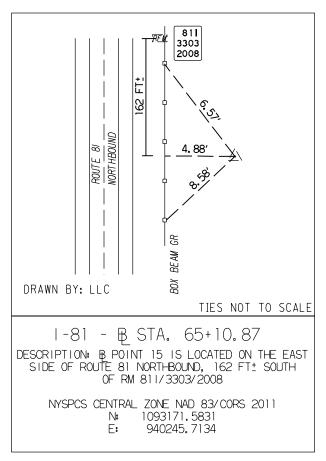
#### NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

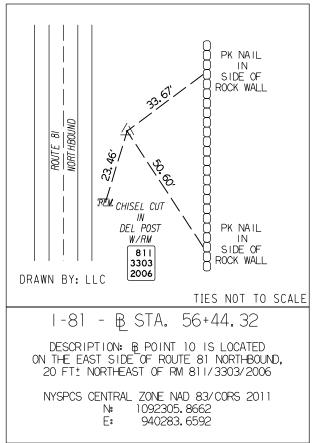
(Nedrow - Forest Interchange) Interstate Route 505: City of Syracuse,

Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1004 PARCEL NO. 81-1004-WOA SHEET 2 OF 2 SHEETS





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AUGUST 5, 20 21

George A. Doucette, Jr., P.E.

Regional Design Engineer

for the Regional Director of Transportation

Region No. 3



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Popli Design Group

By: Timothy T. Odell, Land Surveyor P.L.S. License No. 50995

#### DARLENE H. SCOTT ( REPUTED OWNER )

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Date	20

, Office of Right-of-Way Office of Right-of-Way

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F.I.C. 64-7

Interstate Route 505-3-2.100

(Nedrow - Forest Interchange) Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street

NEW YORK STATE DEPARTMENT OF TRANSPORTATION **ACQUISITION MAP** 

PIN 3501.98

MAP NO. 81-1005 PARCEL NO. 81-1005-WOA SHEET 1 OF 3 SHEETS

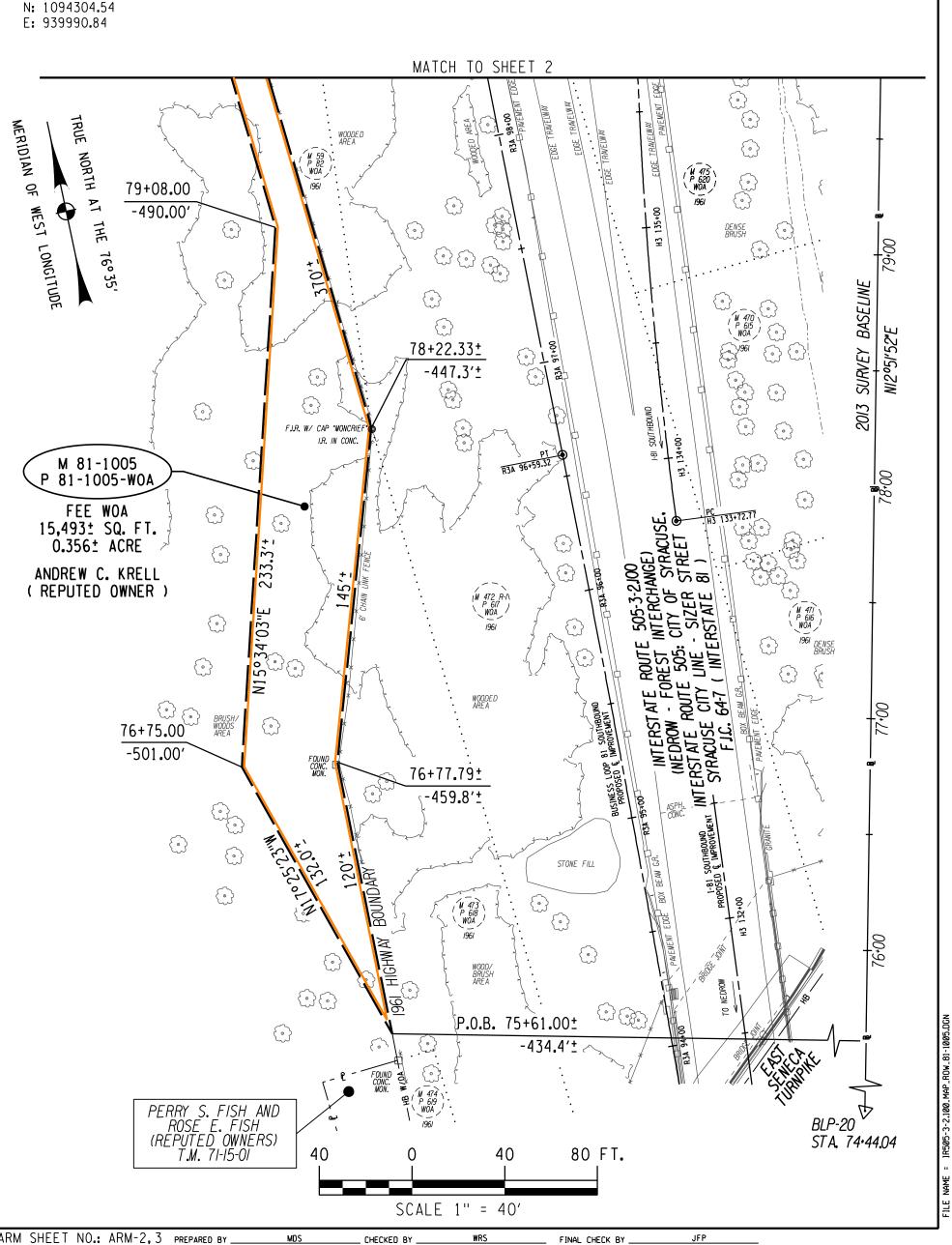
MAP REFERENCE INFORMATION: ANDREW C. KRELL Part of Farm Lot 121 of the ( REPUTED OWNER ) Onondaga Reservation

> CCD INST. NO. 2020-00026395 TRN 1005

Type: FEE WITHOUT ACCESS Portion of 2021 Tax Map Ref. No. 71-15-03.1 City of Syracuse County of Onondaga State of New York

PARCEL SUMMARY

Parcel Locator Point: Parcel No: 81-1005-WOA N: 1094304.54



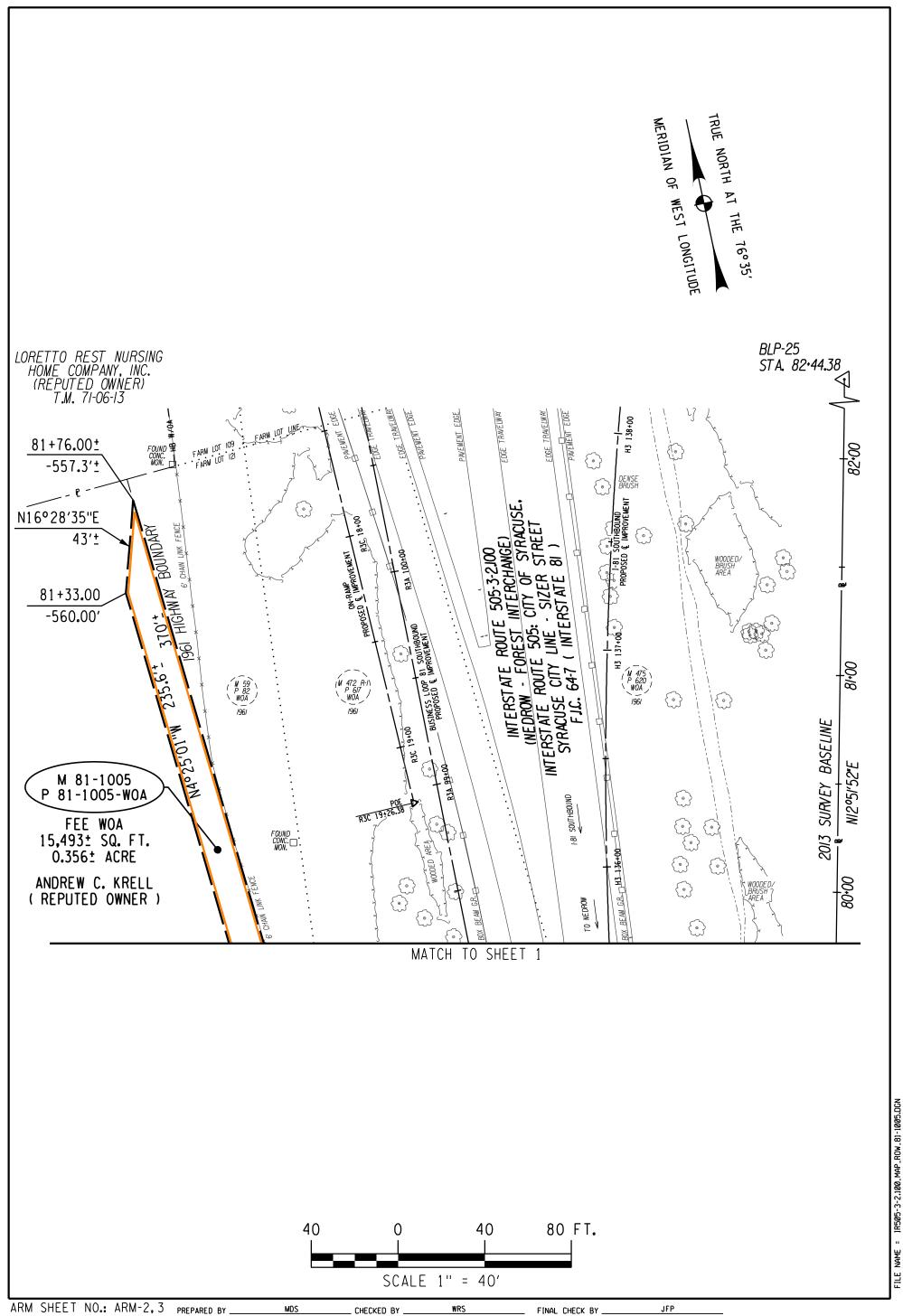
# I-81 VIADUCT PROJECT Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

## NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1005 PARCEL NO. 81-1005-WOA SHEET 2 OF 3 SHEETS



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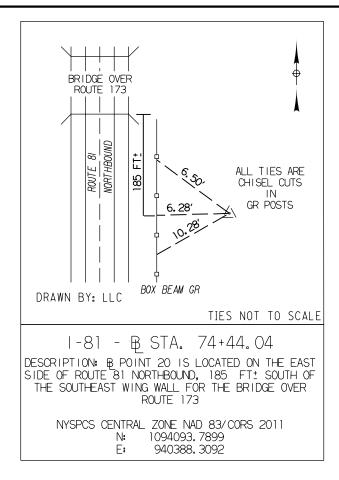
Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

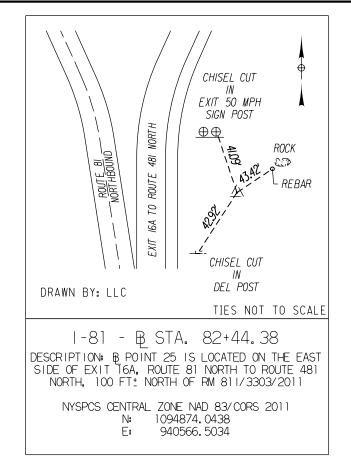
# NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street

F.I.C. 64-7 PIN 3501.98

MAP NO. 81-1005 PARCEL NO. 81-1005-WOA SHEET 3 OF 3 SHEETS





All that piece or parcel of property designated as Parcel No. 81-1005-WOA, as shown on the accompanying map, to be acquired in Fee, without right of access to and from abutting property.

SUBJECT TO utility easements and right-of-ways of record heretofore conveyed affecting the above described property.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

Date \_\_\_\_\_\_MARCH 15, 2022

Robert W. Rugg, P.E. Regional Design Engineer

for the Regional Director of Transportation

Region No. 3



"Unauthorized alteration of a survey map bearing a licensed land surveyor's seal is a violation of the New York State Education Law."

I hereby certify that this map was prepared in accordance with current NYSDOT policies, standards and procedures.

Date \_\_\_\_\_\_MARCH 14, 2022

Popli Design Group

By: Jeffrey F. Phillips, Land Surveyor P.L.S. License No. 50773

# ANDREW C. KRELL (REPUTED OWNER)

Map of property which the Commissioner of Transportation deems necessary to be acquired by appropriation in the name of the People of the State of New York in fee, without right of access to and from abutting property, except for the purposes of the rights described above, for purposes connected with the highway system of the State of New York pursuant to Sections 30, 340-B and 349-C of the Highway Law and the Eminent Domain Procedure Law.

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Date\_\_\_\_\_\_ 20 \_\_\_\_

, Office of Right-of-Way

Office of Right-of-Way

PREPARED BY \_\_\_\_\_\_ MDS \_\_\_\_ CHECKED BY \_\_\_\_\_ WRS \_\_\_\_ FINAL CHECK BY \_\_\_\_\_ JFP

## I-81 VIADUCT PROJECT Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

## NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street

MAP NO. 81-1006

PARCEL NO. 81-1006-WOA SHEET 1 OF 3 SHEETS F.I.C. 64-7 PIN 3501.98 LORETTO REST NURSING MAP REFERENCE INFORMATION: PARCEL SUMMARY HOME COMPANY, INC. Type: FEE WITHOUT ACCESS Part of Farm Lot 109 of the ( REPUTED OWNER ) Portion of 2021 Tax Map WEST LONGITUDE Onondaga Reservation Ref. Nos. 71-06-13 CCD L. 2498 P. 239 72-09-18 TRN 1006 City of Syracuse County of Onondaga Parcel Locator Point: State of New York ΑT Parcel No: 81-1006-WOA N: 1095460.51 NORTH ᆼ E: 940084.54 MERIDIAN TRUE MATCH TO SHEET 2 DA 109+001 AEA INTERSTATE SYRACUS 12" G 591 STA. 89.84.22 ■81 1 3303 2013 R3C 10+83.12 M 81-1006 P 81-1006-WOA FEE WOA 10,848± SQ. FT. 0.2490 ACRE LORETTO REST NURSING HOME COMPANY, INC. ( REPUTED OWNER ) 87+48.16± DAMAGED FILE NAME = IR505-3-2.100\_MAP\_ROW\_81-1006.DGN <u>87+36.00+</u> 578.4'+ 80 FT. 40 BLP-25 STA. 82•44.38

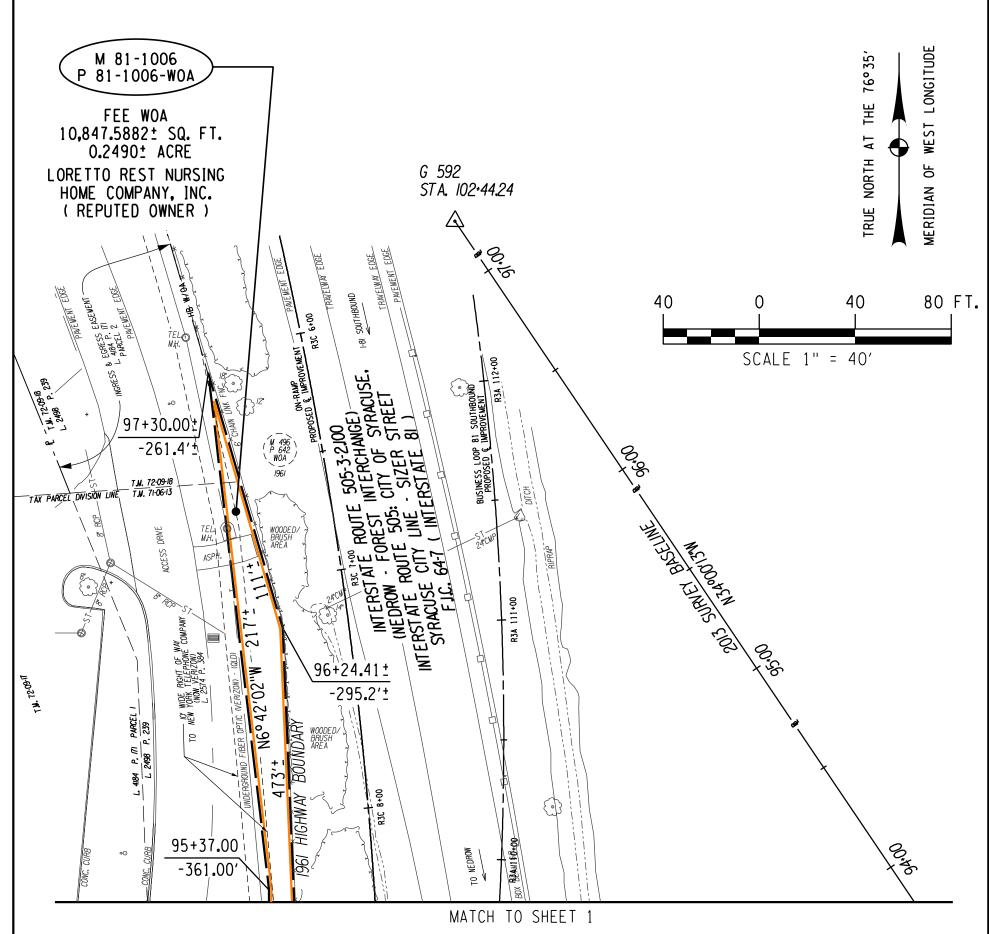
SCALE 1'' = 40'

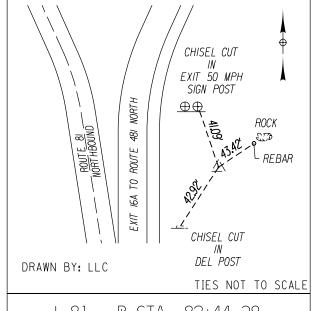
# NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

(Nedrow - Forest Interchange)
Interstate Route 505: City of Syracuse,
Syracuse City Line - Sizer Street
F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1006 PARCEL NO. 81-1006-WOA SHEET 2 OF 3 SHEETS

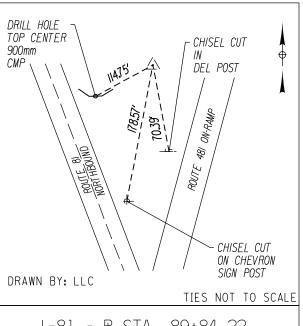




I-81 - B STA. 82+44.38

DESCRIPTION: B POINT 25 IS LOCATED ON THE EAST SIDE OF EXIT 16A, ROUTE 81 NORTH TO ROUTE 481 NORTH, 100 FT± NORTH OF RM 811/3303/2011

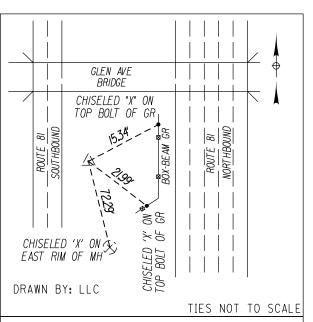
NYSPCS CENTRAL ZONE NAD 83/CORS 2011 N: 1094874,0438 E: 940566,5034



I-81 - B STA. 89+84.22

DESCRIPTION: G591 IS LOCATED EAST OF ROUTE 81
NORTHBOUND, ON TOP OF A HILL, NORTH OF THE
ROUTE 481 NORTHBOUND ON-RAMP FROM ROUTE 81
NORTH

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 N: 1095602.1422 E: 940697.8014



I-81 - В STA. 102+44.24

DESCRIPTION: G592 IS LOCATED IN THE MEDIAN OF ROUTE 81 NORTHBOUND AND SOUTHBOUND, SOUTH OF THE GLEN AVE BRIDGE OVERPASS

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 N: 1096646.6976 E: 939993.1416

F.I.C. 64-7

Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street

NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

PIN 3501.98

MAP NO. 81-1006 PARCEL NO. 81-1006-WOA SHEET 3 OF 3 SHEETS

All that piece or parcel of property designated as Parcel No. 81-1006-WOA, as shown on the accompanying map, to be acquired in Fee, without right of access to and from abutting property.

SUBJECT TO the easement rights of others as their interest may appear as set forth in grant dated September 2, 1975 by Loretto Rest Nursing Home Company, Inc., grantor, to The New York Telephone Company, grantee, recorded in the office of the Clerk of Onondaga County on the 17th day of February, 1976 in Liber 2574 of Deeds at page 384 affecting the area shown and designated on the above map as 10 FEET WIDE RIGHT OF WAY which easement rights are hereby and hereafter restricted and limited as follows:

The owner of such easement rights referred to and affecting Parcel No. 81-1006-WOA above, may continue to enjoy and exercise the permanent right, privilege and easement to transmit electricity or messages by means of electricity and for such purposes construct, reconstruct, maintain, inspect and operate a subterranean system consisting of such encasements, conduits, sleeves, manholes, vents and appurtenances as may be deemed necessary by the owner of such easement for the proper operation or improvement thereof; provided that no manhole, vent or other structure shall be placed at or above the surface of the ground within 5 feet of any edge of pavement, and further providing that no change in the alignment or location of such facilities shall be made, or additional facilities constructed, which will interfere with the highway and its appurtenances or other facilities of the State of New York.

Further providing that the right of ingress, egress and regress for the purposes of construction, reconstruction, maintenance, operation and inspection shall be limited to the areas lying between the outside edges of the highway shoulders and the highway boundary with no right of access for crossing, parking or working on the highway pavement or shoulders for any or all of these purposes; however, when it is necessary that the construction, reconstruction, maintenance and operation of such facilities requires crossing, blocking or barricading the highway pavement or shoulders, it shall be done only upon a written permit from and upon conditions specified by the Commissioner of Transportation or authorized representative, except at times of extreme emergencies. Even at times of extreme emergencies, there shall be no access to or crossing, blocking or barricading of the highway pavement or shoulder without immediate notice to the Commissioner of transportation or authorized representative.

ALSO SUBJECT TO other utility easements and right-of-ways of record heretofore conveyed affecting the above described property.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

Date \_\_\_\_\_AUGUST 5, 2021

Donge a. Doucallago. George A. Doucette, Jr., P.E.

Regional Design Engineer for the Regional Director of Transportation

Region No. 3



"Unauthorized alteration of a survey map bearing a licensed land surveyor's seal is a violation of the New York State Education Law."

I hereby certify that this map was prepared in accordance with current NYSDOT policies, standards and procedures.

Date \_\_\_\_\_\_\_ JULY 26, 20 21

Popli Design Group

By: Timothy T. Odell, Land Surveyor P.L.S. License No. 50995

#### LORETTO REST NURSING HOME COMPANY, INC. ( REPUTED OWNER )

Map of property which the Commissioner of Transportation deems necessary to be acquired by appropriation in the name of the People of the State of New York in fee, without right of access to and from abutting property, except for the purposes of the rights described above, for purposes connected with the highway system of the State of New York pursuant to Sections 30, 340-B and 349-C of the Highway Law and the Eminent Domain Procedure Law.

There is excepted from this appropriation all the right, title and interest, if any, of the United States of America in or to said property.

Pursuant to the statute(s) set forth above and the authority delegated to me by Official Order of the Commissioner of Transportation, this acquisition map is hereby approved and filed in the main office of the New York State Department of Transportation.

I have compared the foregoing copy of the map with the original thereof, as filed in the Office of the State Department of Transportation, and I do hereby certify the same to be a true and correct copy of the original and the whole thereof.

Date_		20
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, Office of Right-of-Way MDS WRS TTO PREPARED BY \_\_\_\_ CHECKED BY \_\_\_\_ FINAL CHECK BY \_\_\_\_

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Office of Right-of-Way

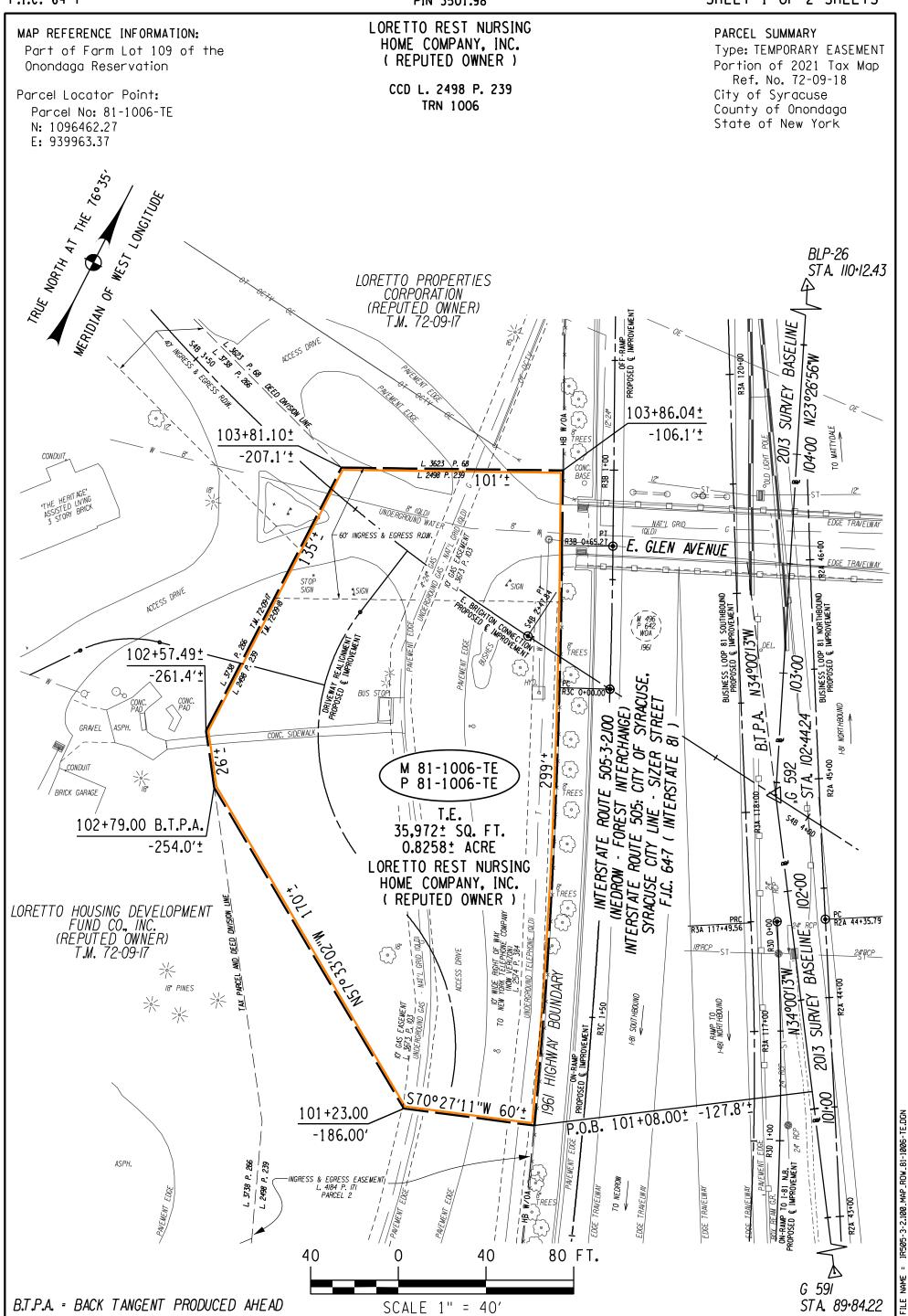
Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

# NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1006-TE PARCEL NO. 81-1006-TE SHEET 1 OF 2 SHEETS



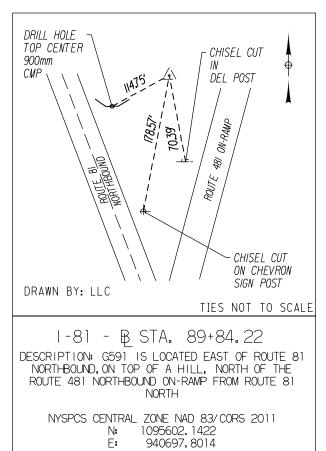
#### NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

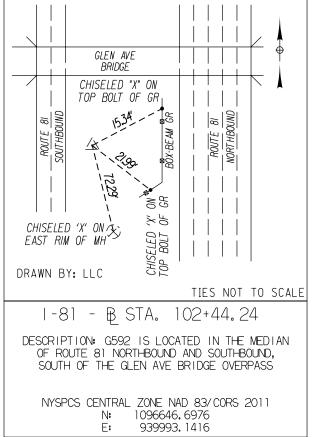
(Nedrow - Forest Interchange) Interstate Route 505: City of Syracuse,

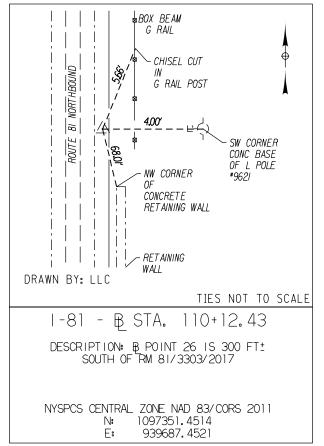
Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1006-TE PARCEL NO. 81-1006-TE SHEET 2 OF 2 SHEETS







#### TEMPORARY EASEMENT FOR WORK AREA

A temporary easement to be exercised in, on and over the property delineated above for the purpose of a work area in connection with the construction or reconstruction of the highway and appurtenances for use and exercisable during the construction or reconstruction of the highway and terminated once deemed no longer necessary for highway purposes and released by the Commissioner of Transportation or other authorized representative acting for the People of the State of New York, or its assigns by the filing of a certificate pursuant to Highway Law Section 30 (20). Such easement shall be exercised in and to all that piece or parcel of property designated as Parcel No. 81-1006-TE, as shown on the accompanying map.

RESERVING, however, to the owner of any right, title or interest in and to the property above delineated and such owner's successors or assigns, the right of access and the right of using said property and such use shall not be further limited or restricted under this easement beyond that which is necessary to effectuate its purposes for the construction or reconstruction of the herein identified project.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

Date \_\_\_\_\_AUGUST 5, 2021

George A. Doucette. Jr., P.E. Regional Design Engineer

Deorge a. Doucalle fr.

for the Regional Director of Transportation Region No. 3



"Unauthorized alteration of a survey map bearing a licensed land surveyor's seal is a violation of the New York State Education Law."

I hereby certify that this map was prepared in accordance with current NYSDOT policies, standards and procedures.

Date \_\_\_\_\_\_ JULY 26, 20 21

Popli Design Group

By: Timothy T. Odell, Land Surveyor P.L.S. License No. 50995

#### LORETTO REST NURSING HOME COMPANY. INC. ( REPUTED OWNER )

Map of property in and to which an easement as herein above defined is deemed necessary by the Commissioner of Transportation to be acquired by appropriation in the name of the People of the State of New York for purposes connected with the highway system of the State of New York pursuant to Sections 30, 340-B and 349-C of the Highway Law and the Eminent Domain Procedure Law.

There is excepted from this appropriation all the right, title and interest, if any, of the United States of America in or to said property.

Pursuant to the statute(s) set forth above and the authority delegated to me by Official Order of the Commissioner of Transportation, this acquisition map is hereby approved and filed in the main office of the New York State Department of Transportation.

I have compared the foregoing copy of the map with the original thereof, as filed in the Office of the State Department of Transportation, and I do hereby certify the same to be a true and correct copy of the original and the whole thereof.

Date	20

, Office of Right-of-Way Office of Right-of-Way

PREPARED BY	MDS	CHECKED BY	JFP	EINAL CHECK RY	110	

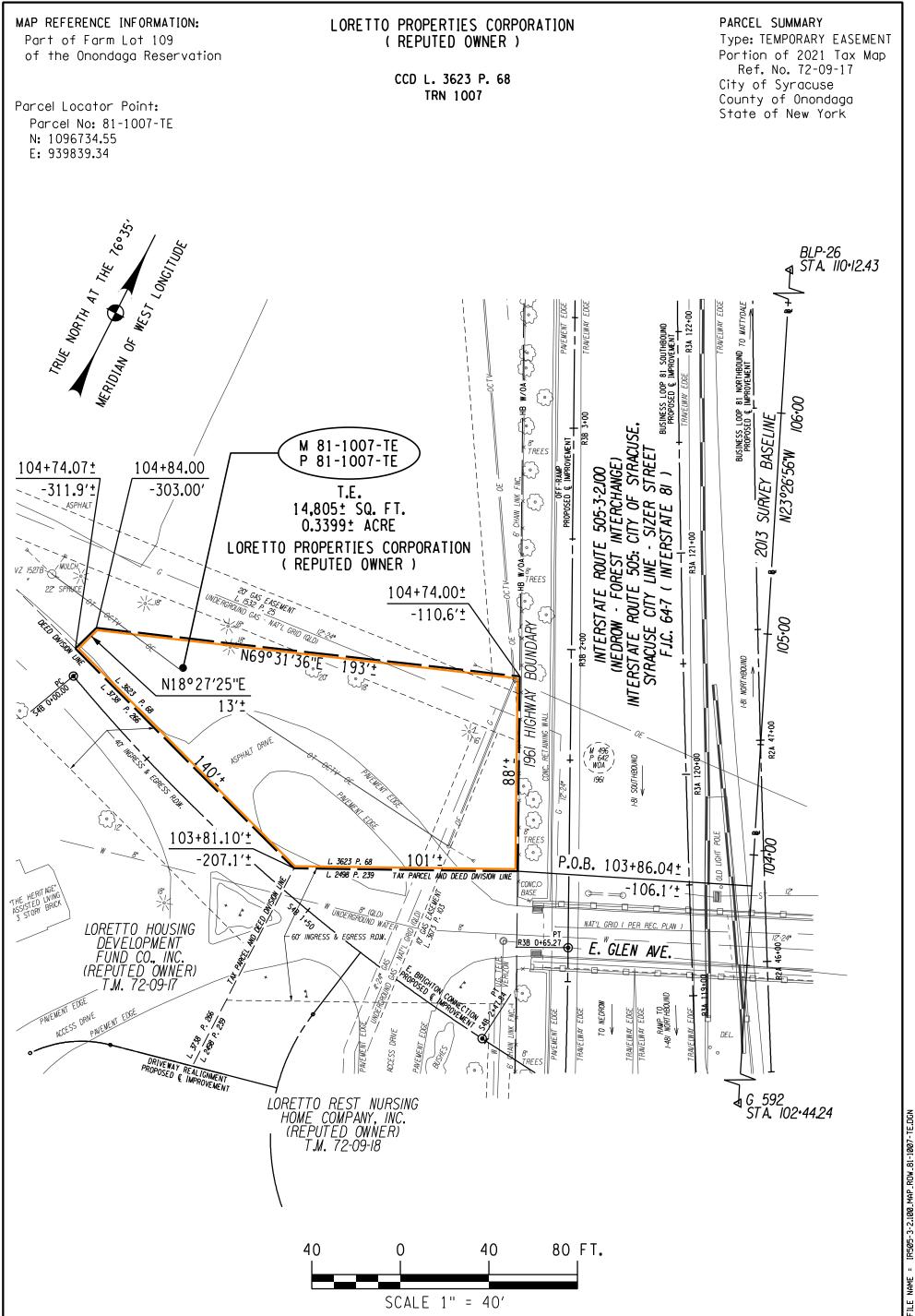
Interstate Route 505-3-2.100 (Nedrow - Forest Interchange)

## NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street

MAP NO. 81-1007-TE PARCEL NO. 81-1007-TE SHEET 1 OF 2 SHEETS

#### F.I.C. 64-7 PIN 3501.98 PARCEL SUMMARY LORETTO PROPERTIES CORPORATION Part of Farm Lot 109 ( REPUTED OWNER ) of the Onondaga Reservation



SCALE 1'' = 40'

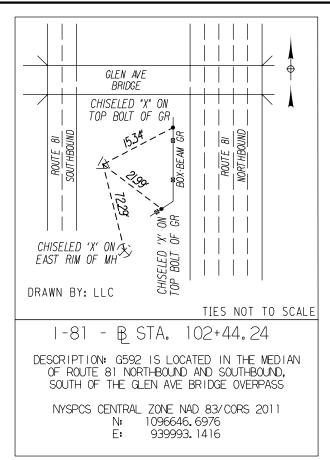
#### NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

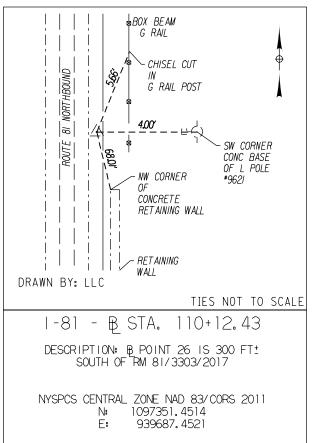
(Nedrow - Forest Interchange)

Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1007-TE PARCEL NO. 81-1007-TE SHEET 2 OF 2 SHEETS





#### TEMPORARY EASEMENT FOR WORK AREA

A temporary easement to be exercised in, on and over the property delineated above for the purpose of a work area in connection with the construction or reconstruction of the highway and appurtenances for use and exercisable during the construction or reconstruction of the highway and terminated once deemed no longer necessary for highway purposes and released by the Commissioner of Transportation or other authorized representative acting for the People of the State of New York, or its assigns by the filing of a certificate pursuant to Highway Law Section 30 (20). Such easement shall be exercised in and to all that piece or parcel of property designated as Parcel No. 81-1007-TE, as shown on the accompanying map.

RESERVING, however, to the owner of any right, title or interest in and to the property above delineated and such owner's successors or assigns, the right of access and the right of using said property and such use shall not be further limited or restricted under this easement beyond that which is necessary to effectuate its purposes for the construction or reconstruction of the herein identified project.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

Date \_\_\_\_\_AUGUST 5, 2021

Deorge a. Doucella fr. George A. Doucette, Jr., P.E.

for the Regional Director of Transportation Region No. 3

Regional Design Engineer



"Unauthorized alteration of a survey map bearing a licensed land surveyor's seal is a violation of the New York State Education Law."

I hereby certify that this map was prepared in accordance with current NYSDOT policies, standards and procedures.

JUL Y 26, 20 21

Popli Design Group

By: Timothy T. Odell, Land Surveyor P.L.S. License No. 50995

#### LORETTO PROPERTIES CORPORATION ( REPUTED OWNER )

Map of property in and to which an easement as herein above defined is deemed necessary by the Commissioner of Transportation to be acquired by appropriation in the name of the People of the State of New York for purposes connected with the highway system of the State of New York pursuant to Sections 30, 340-B and 349-C of the Highway Law and the Eminent Domain Procedure Law.

There is excepted from this appropriation all the right, title and interest, if any, of the United States of America in or to said property.

Pursuant to the statute(s) set forth above and the authority delegated to me by Official Order of the Commissioner of Transportation, this acquisition map is hereby approved and filed in the main office of the New York State Department of Transportation.

I have compared the foregoing copy of the map with the original thereof, as filed in the Office of the State Department of Transportation, and I do hereby certify the same to be a true and correct copy of the original and the whole thereof.

Date	20

Office of Right-of-Way

NAME = IR505-3-2,100\_MAP\_ROW\_81-1007-

DEDADED BY	MDS	CHECKED BY	JEP	EINAL CHECK BY	TTO	

, Office of Right-of-Way

## I-81 VIADUCT PROJECT Interstate Route 505-3-2.100

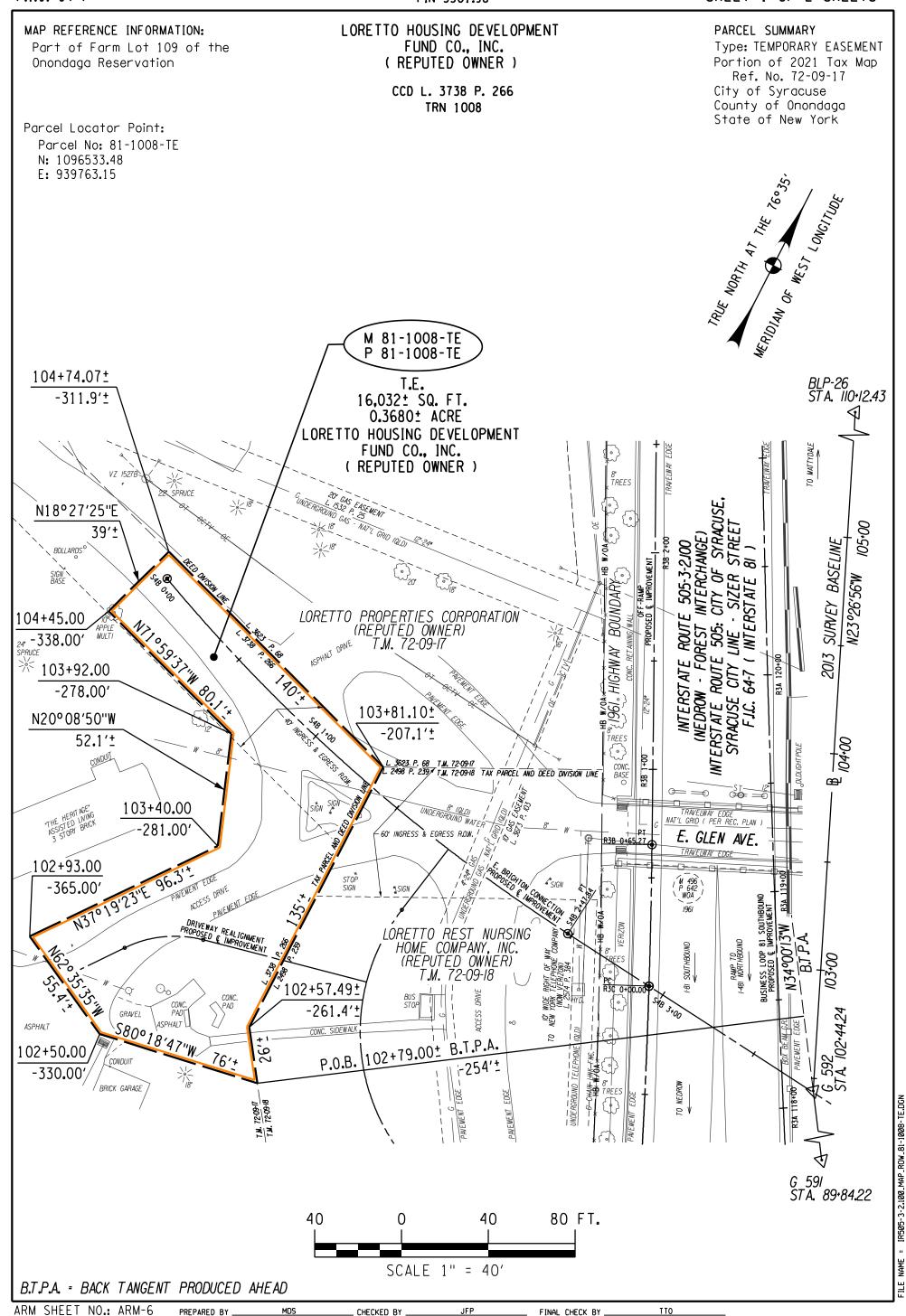
### NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

(Nedrow - Forest Interchange) Interstate Route 505: City of Syracuse,

Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1008-TE PARCEL NO. 81-1008-TE SHEET 1 OF 2 SHEETS



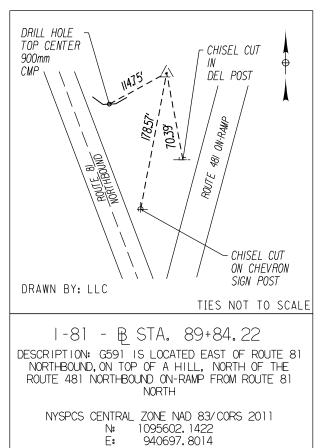
#### NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

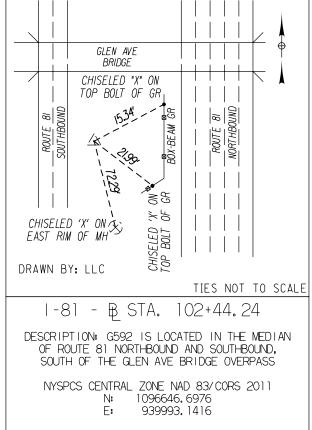
(Nedrow - Forest Interchange) Interstate Route 505: City of Syracuse,

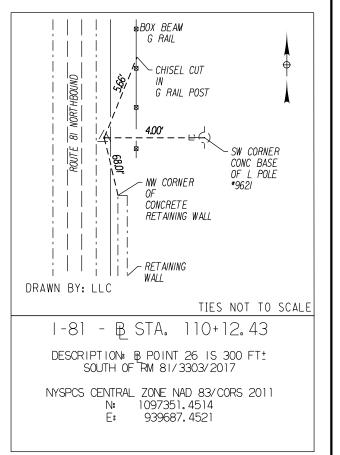
Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1008 PARCEL NO. 81-1008-TE SHEET 2 OF 2 SHEETS







#### TEMPORARY EASEMENT FOR WORK AREA

A temporary easement to be exercised in, on and over the property delineated above for the purpose of a work area in connection with the construction or reconstruction of the highway and appurtenances for use and exercisable during the construction or reconstruction of the highway and terminated once deemed no longer necessary for highway purposes and released by the Commissioner of Transportation or other authorized representative acting for the People of the State of New York, or its assigns by the filing of a certificate pursuant to Highway Law Section 30 (20). Such easement shall be exercised in and to all that piece or parcel of property designated as Parcel No. 81-1008-TE, as shown on the accompanying map.

RESERVING, however, to the owner of any right, title or interest in and to the property above delineated and such owner's successors or assigns, the right of access and the right of using said property and such use shall not be further limited or restricted under this easement beyond that which is necessary to effectuate its purposes for the construction or reconstruction of the herein identified project.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

Date \_\_\_\_\_AUGUST 5, 2021

George A. Doucette. Jr., P.E. Regional Design Engineer

Deorge a. Doucella fr.

for the Regional Director of Transportation Region No. 3



"Unauthorized alteration of a survey map bearing a licensed land surveyor's seal is a violation of the New York State Education Law."

I hereby certify that this map was prepared in accordance with current NYSDOT policies, standards and procedures.

Date \_\_\_\_\_\_ JULY 26, 20 21

Popli Design Group

By: Timothy T. Odell, Land Surveyor P.L.S. License No. 50995

#### LORETTO HOUSING DEVELOPMENT FUND CO., INC. ( REPUTED OWNER )

Map of property in and to which an easement as herein above defined is deemed necessary by the Commissioner of Transportation to be acquired by appropriation in the name of the People of the State of New York for purposes connected with the highway system of the State of New York pursuant to Sections 30, 340-B and 349-C of the Highway Law and the Eminent Domain Procedure Law.

There is excepted from this appropriation all the right, title and interest, if any, of the United States of America in or to said property.

Pursuant to the statute(s) set forth above and the authority delegated to me by Official Order of the Commissioner of Transportation, this acquisition map is hereby approved and filed in the main office of the New York State Department of Transportation.

I have compared the foregoing copy of the map with the original thereof, as filed in the Office of the State Department of Transportation, and I do hereby certify the same to be a true and correct copy of the original and the whole thereof.

Date	20

, Office of Right-of-Way					Office of Right-of-Way	
PREPARED BY	MDS	CHECKED BY	JFP	FINAL CHECK BY	TTO	

# I-81 VIADUCT PROJECT Interstate Route 505-3-2.100

ARM SHEET NO.: ARM-5, 6 PREPARED BY \_\_\_

MDS

CHECKED BY \_\_

FINAL CHECK BY \_

# NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

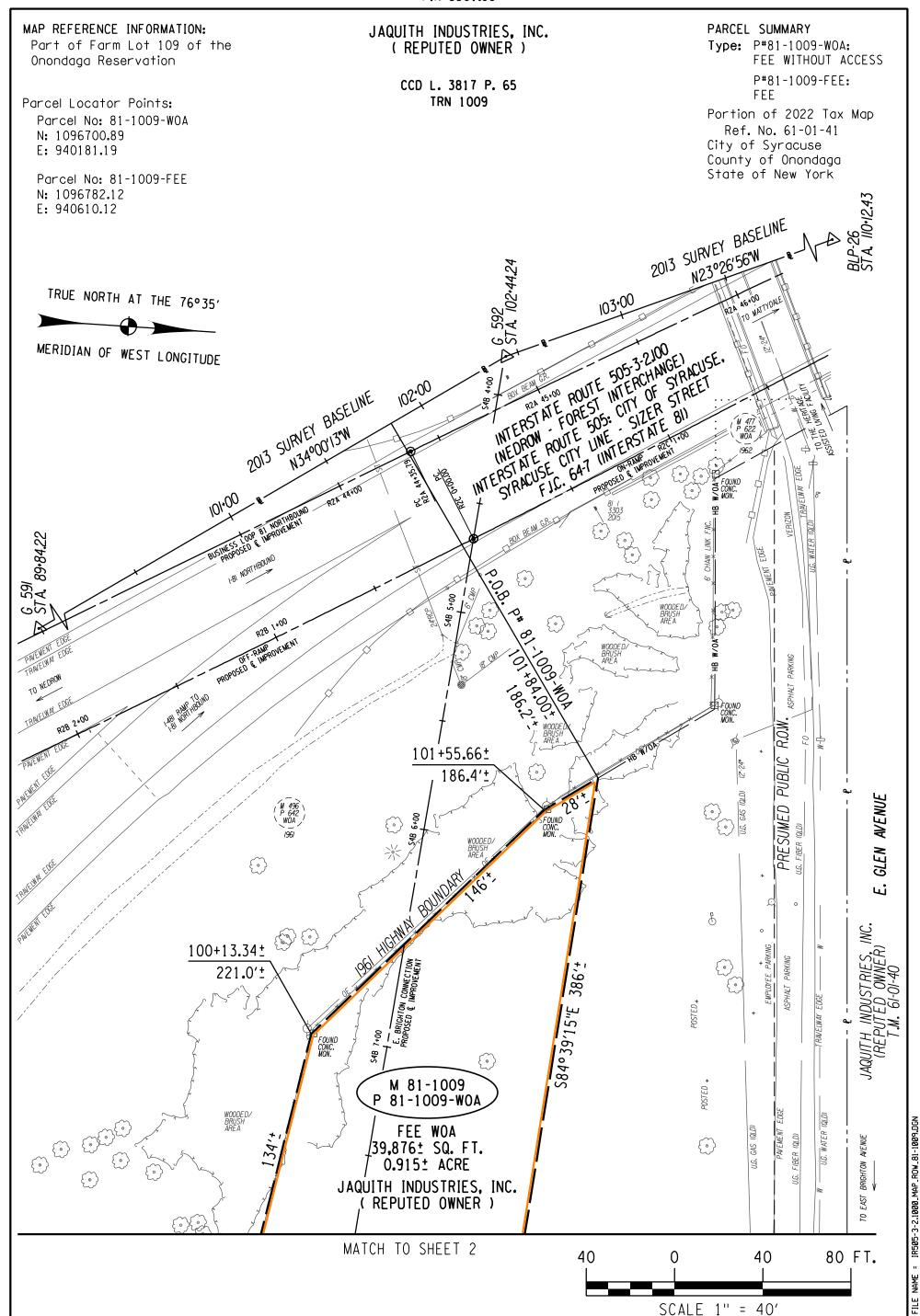
(Nedrow - Forest Interchange)
Interstate Route 505: City of Syracuse,
Syracuse City Line - Sizer Street

Syracuse City Line - Sizer Street F.I.C. 64-7

PIN 3501.98

MAP NO. 81-1009 PARCEL NOS. 81-1009-WOA 81-1009-FEE

SHEET 1 OF 3 SHEETS



I-81 VIADUCT PROJECT Interstate Route 505-3-2.100 (Nedrow - Forest Interchange) Interstate Route 505: City of Syracuse,

Syracuse City Line - Sizer Street

NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

MAP NO. 81-1009 PARCEL NOS. 81-1009-WOA 81-1009-FEE SHEET 2 OF 3 SHEETS

PIN 3501.98

F.I.C. 64-7 TRUE NORTH AT THE 76°35' MERIDIAN OF WEST LONGITUDE MATCH TO SHEET 1 548 8+00 99+19.61± 316.9'± POSTED U.G. GAS S4B 8+25.05 £ M 81-1009 R.O.W. P 81-1009-WOA 12 FEE WOA GLEN AVENUE 39,876± SQ. FT. PVBL 0.915± ACRE JAQUITH INDUSTRIES, INC. ( REPUTED OWNER ) Ę. 7,8,009 100+73,00 99+39.00 485.00' P.O.B. P# 81-1009-FEE 00+01 1,50,M 100+11.47± 587.2'± 98+57.13± · HB W/OA FOUND CONC. MON. 509.5′± 76′± ∖HIGHWAŶ BDŶ. 99+25**.**00± 1975 543.7′± **∞** (N 26 P 29 FEE) M 81-1009 P 81-1009-FEE FEE 4,972 SQ. FT. BRUSH BRUSH JAQUITH INDUSTRIES, INC. ( REPUTED OWNER ) 100+32.17± 99+68**.**50± 670.8' 659.1′± TO S. STATE STREET SAD 117+00 EAST BRIGHTON AVENUE POE 54B 11+50.46 - ORIGINAL E. BRIGHTON AVE. STREET BOUNDARY IR505-3-2,100\_MAP\_ROW\_81-1009,DGN TO ROCK CUT ROAD ORIGINAL E. BRIGHTON AVE. STREET BOUNDARY. 40 80 FT. 40 0

SCALE 1'' = 40'

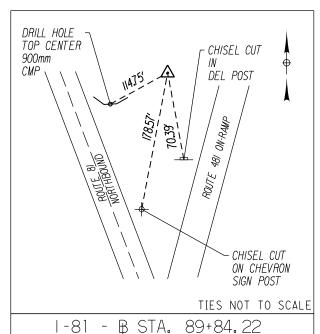
FILE NAME

Interstate Route 505-3-2.100 (Nedrow - Forest Interchange) Interstate Route 505: City of Syracuse, Syracuse City Line - Sizer Street F.I.C. 64-7

MAP NO. 81-1009

PIN 3501.98

PARCEL NOS. 81-1009-WOA 81-1009-FEE SHEET 3 OF 3 SHEETS



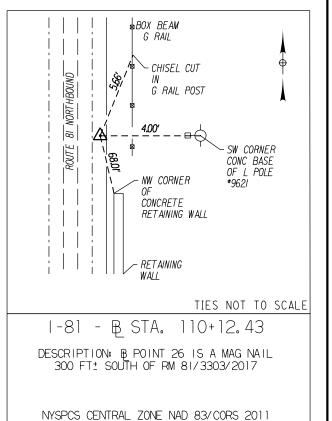
DESCRIPTION: G591 IS A REBAR WITH CAP LOCATED EAST OF ROUTE 81 NORTHBOUND, ON TOP OF A HILL, NORTH OF THE ROUTE 481 NORTHBOUND ON-RAMP FROM ROUTE 81 NORTH

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1095602.1422 N 940697.8014

GLEN AVE CHISELED "X" ON TOP BOLT OF GR SOUTHBOUND 8 88 7.4 CHISELED 'X' ON S CHISELED TOP BOLT EAST RIM OF MH TIES NOT TO SCALE I-81 - B STA. 102+44.24

DESCRIPTION: G592 IS A REBAR WITH CAP LOCATED IN THE MEDIAN OF ROUTE 81 NORTHBOUND AND SOUTHBOUND, SOUTH OF THE GLEN AVE BRIDGE OVERPASS

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1096646.6976 N 939993.1416



1097351.4514

939687.4521

N

PARCEL NO. 81-1009-WOA

All that piece or parcel of property designated as Parcel No. 81-1009-WOA, as shown on the accompanying map, to be acquired in Fee, without right of access to and from abutting property.

SUBJECT TO utility easements and right-of-ways of record heretofore conveyed affecting the above described property.

#### PARCEL NO. 81-1009-FEE

All that piece or parcel of property designated as Parcel No. 81-1009-FEE, as shown on the accompanying map, to be acquired in Fee.

SUBJECT TO utility easements and right-of-ways of record heretofore conveyed affecting the above described property.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

JULY 7, 20 22

Robert W. Rugg, P.E. Regional Design Engineer for the Regional Director of Transportation Region No. 3



JAQUITH INDUSTRIES, INC. ( REPUTED OWNER )

"Unauthorized alteration of a survey map bearing a licensed land surveyor's seal is a violation of the New York State Education Law."

I hereby certify that this map was prepared in accordance with current NYSDOT policies, standards and procedures.

JULY 6, 20 22 Date Popli Design Group

By: Jeffrey F. Phillips, Land Surveyor P.L.S. License No. 50773

Total Area: 44,848 th SQ. FT. 1.029 ± ACRES

Map of property showing (1) Parcel No. 81-1009-WOA to be acquired in fee, without right of access to and from abutting property, except for the purposes of the rights described above, and (2) Parcel No. 81-1009-FEE to be acquired in fee, except for the purposes of the rights described above; each of which the Commissioner of Transportation deems necessary to be acquired by appropriation in the name of the People of the State of New York for purposes connected with the highway system of the State of New York pursuant to Sections 30, 340-B and 349-C of the Highway Law and the Eminent Domain Procedure Law.

There is excepted from this appropriation all the right, title and interest, if any, of the United States of America in or to said property.

Pursuant to the statute(s) set forth above and the authority delegated to me by Official Order of the Commissioner of Transportation, this acquisition map is hereby approved and filed in the main office of the New York State Department of Transportation.

I have compared the foregoing copy of the map with the original thereof, as filed in the Office of the State Department of Transportation, and I do hereby certify the same to be a true and correct copy of the original and the whole thereof.

Date		ZU <b></b>

Office	of	Right-of-Way

NAME = IR505-3-2,100\_MAP\_ROW\_81-1009,DGN

PREPARED BY	MDS	CHECKED BY	JFP	EINAL CHECK RY	JFP	

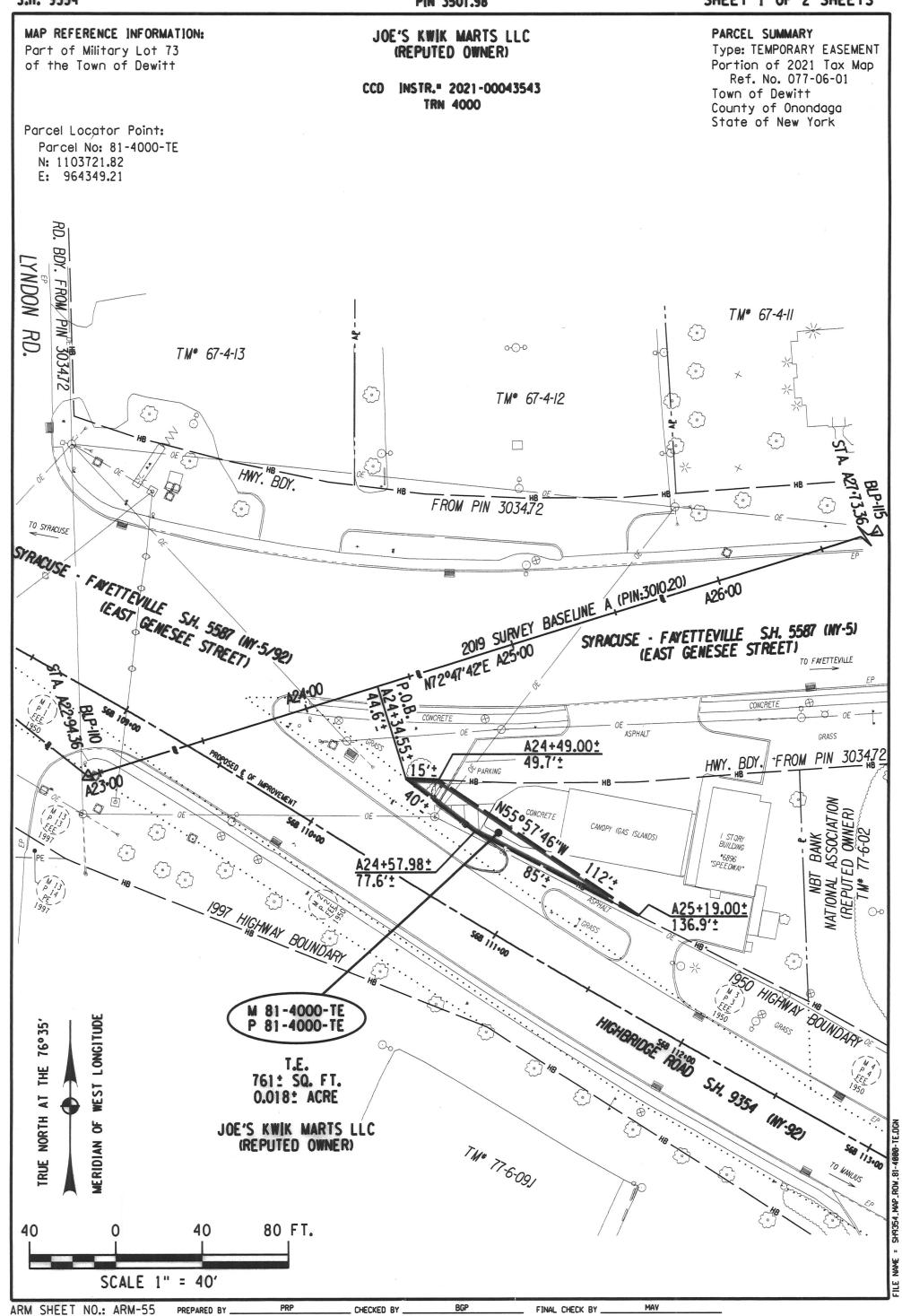
, Office of Right-of-Way

I-81 VIADUCT PROJECT Highbridge Road S.H. 9354

PREPARED BY

PIN 3501.98

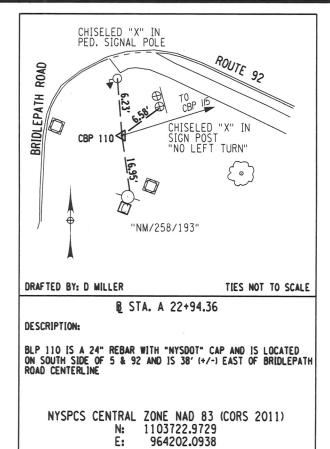
MAP NO. 81-4000-TE PARCEL NO. 81-4000-TE SHEET 1° OF 2 SHEETS

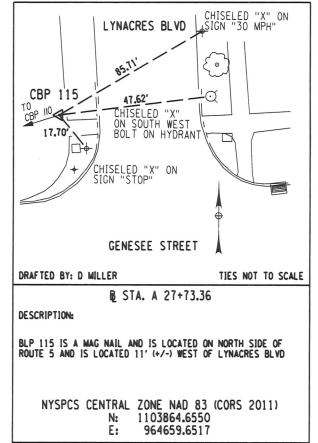


I-81 VIADUCT PROJECT Highbridge Road S.H. 9354

PIN 3501.98

MAP NO. 81-4000-TE PARCEL NO. 81-4000-TE SHEET 2" OF 2 SHEETS





### TEMPORARY EASEMENT FOR WORK AREA

A temporary easement to be exercised in, on and over the property delineated above for the purpose of a work area in connection with the construction or reconstruction of the highway and appurtenances for use and exercisable during the construction or reconstruction of the highway and terminated once deemed no longer necessary for highway purposes and released by the Commissioner of Transportation or other authorized representative acting for the People of the State of New York, or its assigns by the filing of a certificate pursuant to Highway Law Section 30 (20). Such easement shall be exercised in and to all that piece or parcel of property designated as Parcel No. 81-4000-TE, as shown on the accompanying map.

RESERVING, however, to the owner of any right, title or interest in and to the property above delineated and such owner's successors or assigns, the right of access and the right of using said property and such use shall not be further limited or restricted under this easement beyond that which is necessary to effectuate its purposes for the construction or reconstruction of the herein identified project.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

Date NOVE MBER 12 20 21

Sparge a Doucatta fr

George A. Doucette, Jr., P.E. Regional Design Engineer for the Regional Director of Transportation Region No. 3



"Unauthorized alteration of a survey map bearing a licensed land surveyor's seal is a violation of the New York State Education Law."

I hereby certify that this map was prepared in accordance with current NYSDOT policies, standards and procedures.

NOVEMBER 12, 20 21

Prudent Engineering LLP Engineering and Land Surveying By Bradley G. Pcolinsky, Land Surveyor L.S. License No. 050697

### JOE'S KWIK MARTS LLC (REPUTED OWNER)

Map of property in and to which an easement as herein above defined is deemed necessary by the Commissioner of Transportation to be acquired by appropriation in the name of the People of the State of New York for purposes connected with the highway system of the State of New York pursuant to Section 30 of the Highway Law and the Eminent Domain Procedure Law.

There is excepted from this appropriation all the right, title and interest, if any, of the United States of America in or to said property.

Pursuant to the statute(s) set forth above and the authority delegated to me by Official Order of the Commissioner of Transportation, this acquisition map is hereby approved and filed in the main office of the New York State Department of Transportation.

I have compared the foregoing copy of the map with the original thereof, as filed in the Office of the State Department of Transportation, and I do hereby certify the same to be a true and correct copy of the original and the whole thereof.

Date	20	)

, Office o	Right-of-Way	
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Office of Right-of-Way

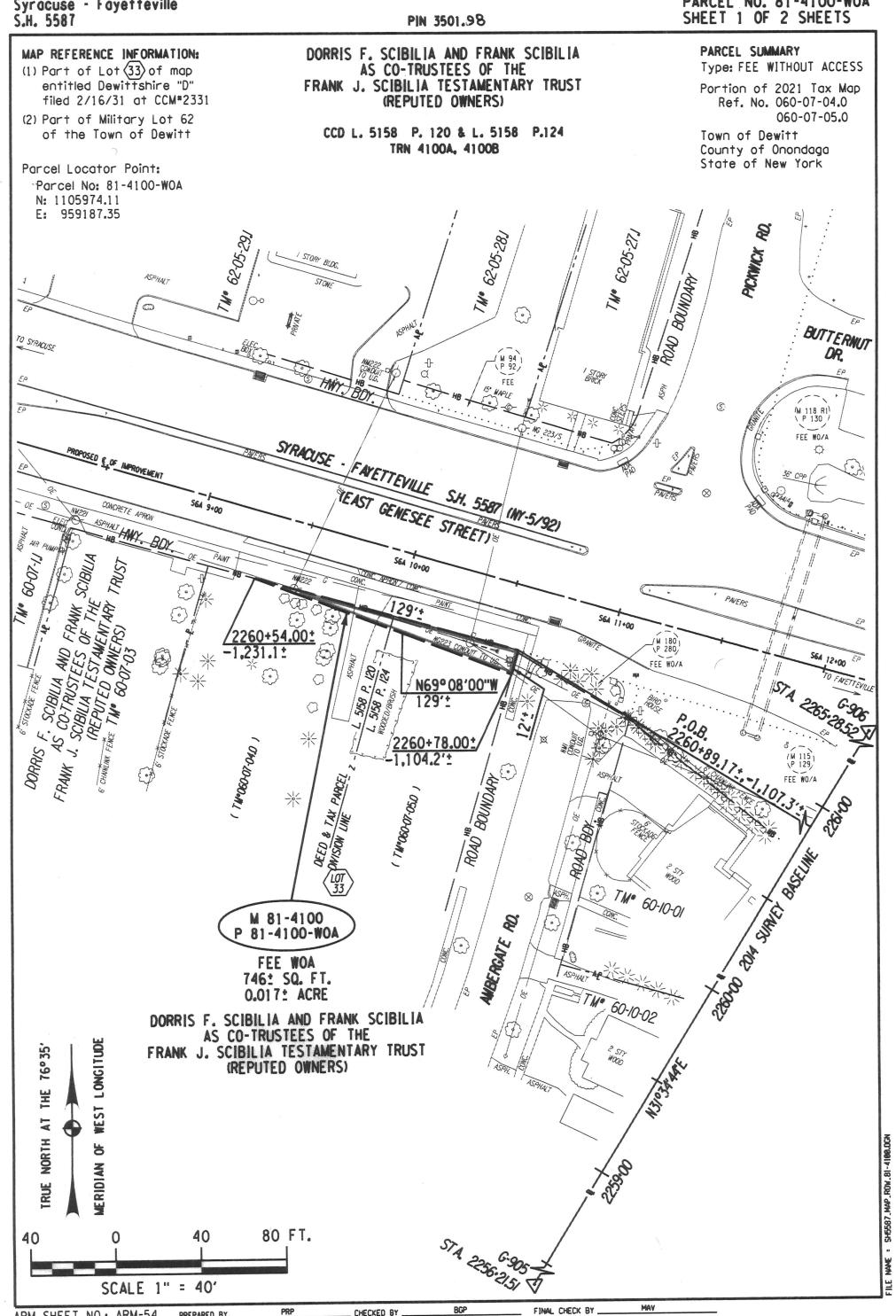
= SH9354\_MAP\_ROW\_81-4000-TE.DGN

I-81 VIADUCT PROJECT Syracuse - Fayetteville

ARM SHEET NO .: ARM-54

PREPARED BY

MAP NO. 81-4100 PARCEL NO. 81-4100-WOA

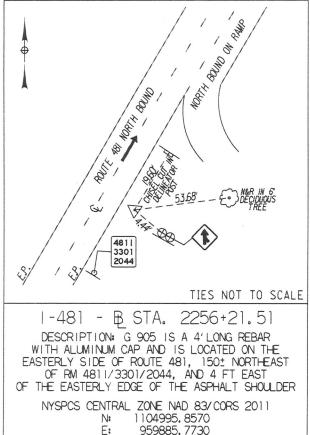


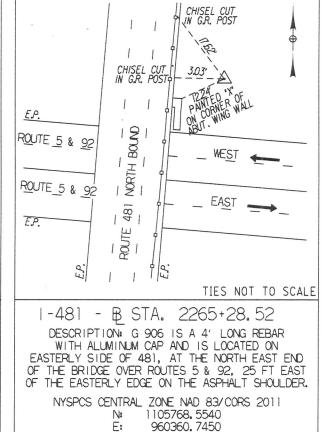
CHECKED BY \_\_

I-81 VIADUCT PROJECT Syracuse - Fayetteville S.H. 5587

PIN 3501.98

MAP NO. 81-4100 PARCEL NO. 81-4100-WOA SHEET 2 OF 2 SHEETS





All that piece or parcel of property designated as Parcel No. 81-4100-WOA, as shown on the accompanying map, to be acquired in Fee, without right of access to and from abutting property.

SUBJECT TO utility easements and right-of-ways of record heretofore conveyed affecting the above described properly.

RESERVING, however, to the owner of the property abutting Parcel No. 81-4100-WOA on the southwest, and such owner's successors or assigns, the right of pedestrian and/or non-motorized access to and from only that portion of the highway right of way devoted to pedestrian and/or non-motorized use.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

Date NOVEMBER 12, 20 21

George a. Doucatte gr.

George A. Doucette, Jr., P.E. Regional Design Engineer for the Regional Director of Transportation Region No. 3 OF NEW COLORS

"Unauthorized alteration of a survey map bearing a licensed land surveyor's seal is a violation of the New York State Education Law."

I hereby certify that this map was prepared in accordance with current NYSDOT policies, standards and procedures.

Date NOVEMBER 12 20 21

Prudent Engineering LLP
Engineering and Land Surveying
By Bradley G. Pcolinsky, Land Surveyor
L.S. License No. 050697

DORRIS F. SCIBILIA AND FRANK SCIBILIA AS CO-TRUSTEES OF THE FRANK J. SCIBILIA TESTAMENTARY TRUST (REPUTED OWNERS)

Map of property which the Commissioner of Transportation deems necessary to be acquired by appropriation in the name of the People of the State of New York in fee, without right of access to and from abutting property, except for the purposes of the rights described above, for purposes connected with the highway system of the State of New York pursuant to Sections 30 and 340-B of the Highway Law and the Eminent Domain Procedure Law.

There is excepted from this appropriation all the right, title and interest, if any, of the United States of America in or to said property.

Pursuant to the statute(s) set forth above and the authority delegated to me by Official Order of the Commissioner of Transportation, this acquisition map is hereby approved and filed in the main office of the New York State Department of Transportation.

I have compared the foregoing copy of the map with the original thereof, as filed in the Office of the State Department of Transportation, and I do hereby certify the same to be a true and correct copy of the original and the whole thereof.

Date20	
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Office	of	Right-of-Way

PREPARED BY PRP CHECKED BY BGP FINAL CHECK BY MAY

, Office of Right-of-Way

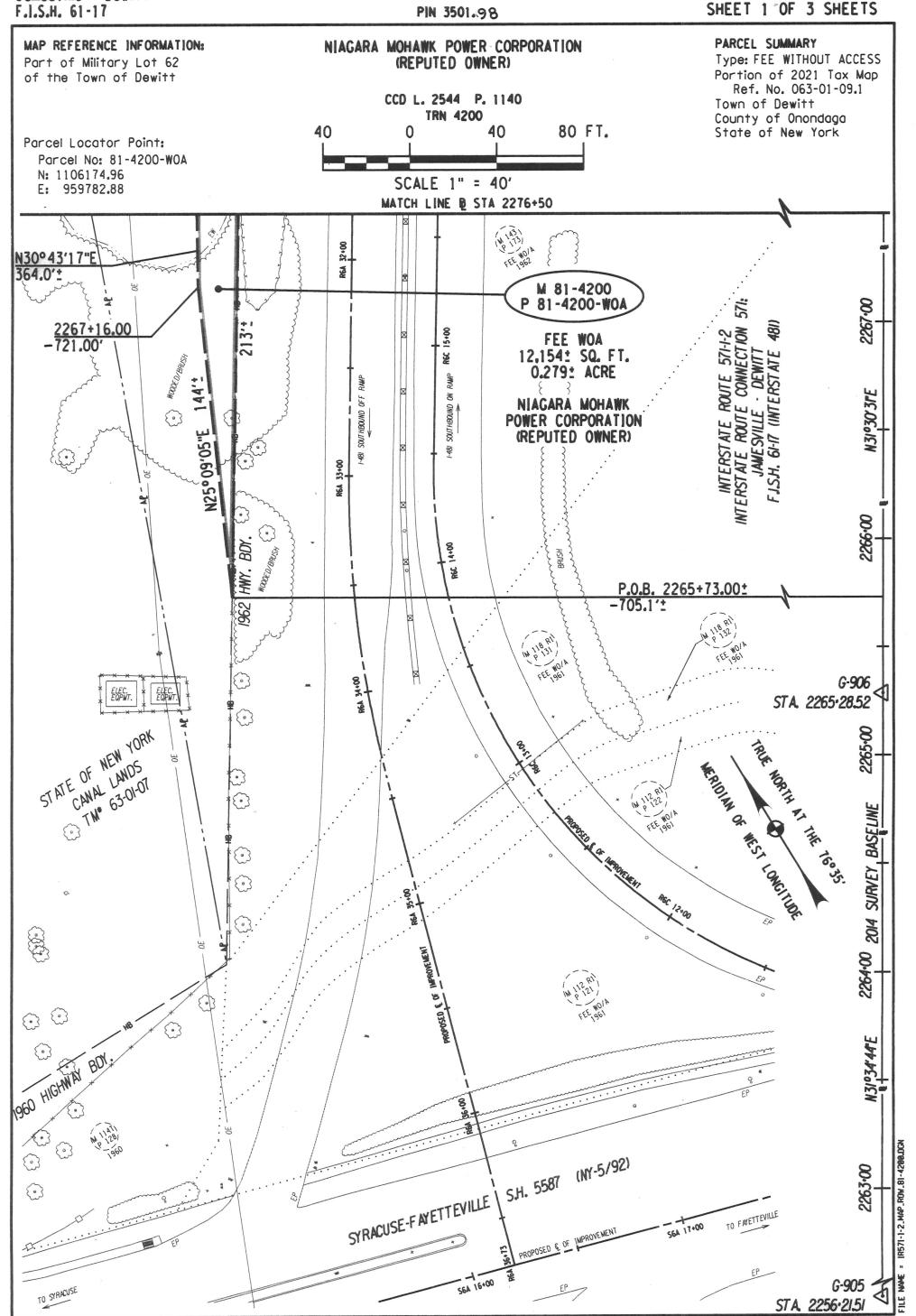
### NEW YORK STATE DEPARTMENT OF TRANSPORTATION VIADUCT PROJECT ACQUISITION MAP

Interstate Route 571-1-2 Interstate Route Connection 571: Jamesville - Dewitt

ARM SHEET NO.: ARM-54

PREPARED BY

MAP NO. 81-4200 PARCEL NO. 81-4200-WOA SHEET 1 OF 3 SHEETS



MAY

FINAL CHECK BY

CHECKED BY

|-81 VIADUCT PROJECT |Interstate Route 571-1-2 |Interstate Route Connection 571: |Jamesville - Dewitt

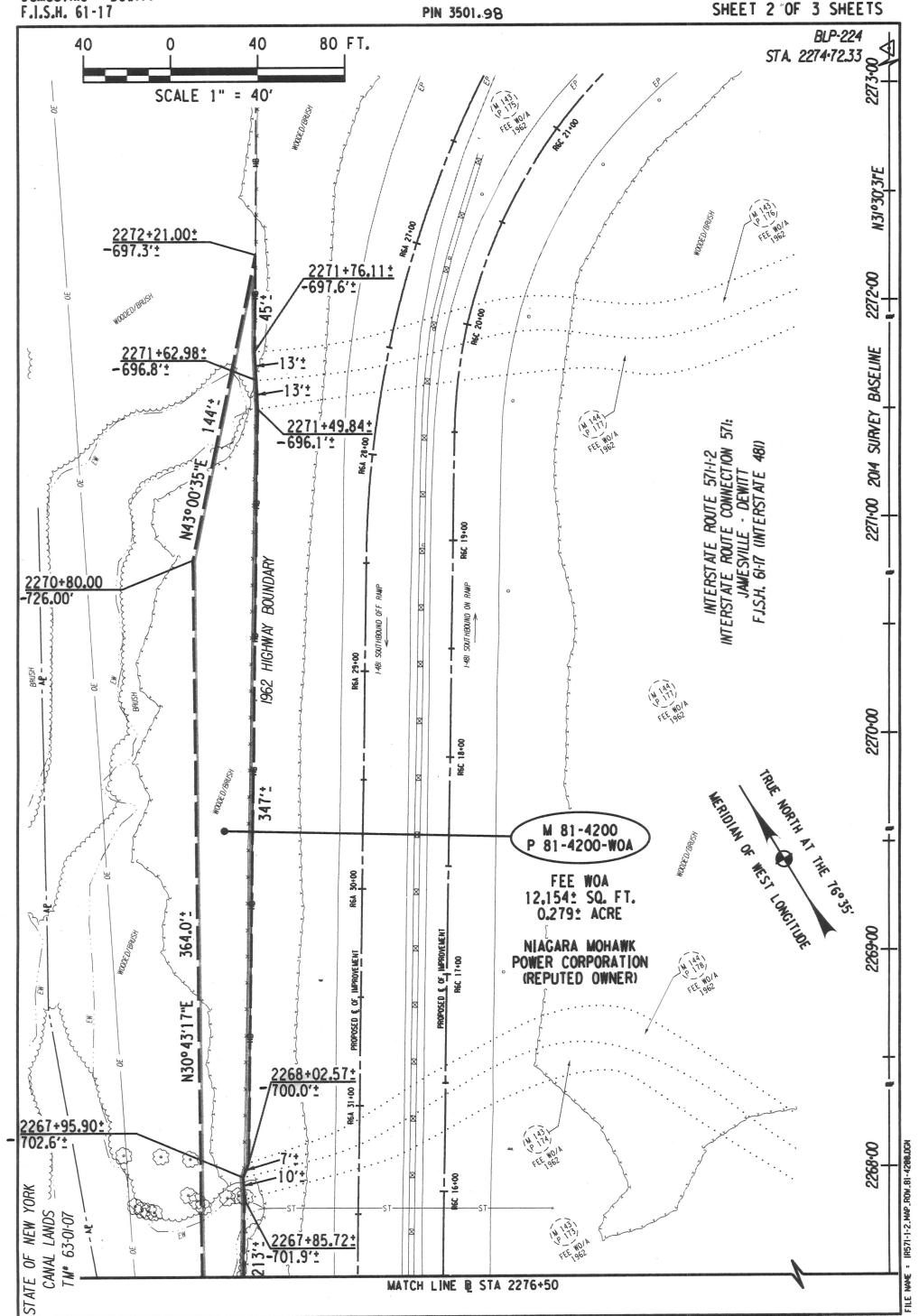
ARM SHEET NO .: ARM-54

PREPARED BY

PRP

CHECKED BY \_

MAP NO. 81-4200 PARCEL NO. 81-4200-WOA SHEET 2 OF 3 SHEETS



MAY

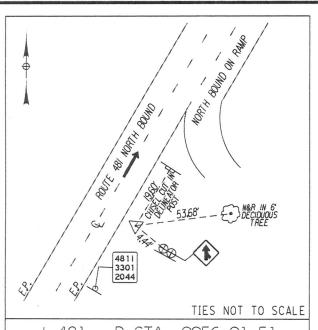
FINAL CHECK BY

# I-81 VIADUCT PROJECT Interstate Route 571-1-2 Interstate Route Connection 571: Jamesville - Dewitt F.I.S.H. 61-17

## NEW YORK STATE DEPARTMENT OF TRANSPORTATION ACQUISITION MAP

PIN 3501.98

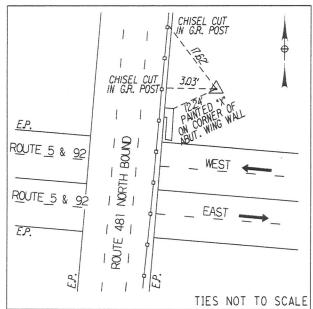
MAP NO. 81-4200 PARCEL NO. 81-4200-WOA SHEET 3 OF 3 SHEETS



I-48] - B STA. 2256+2].5]

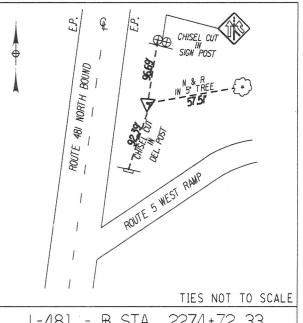
DESCRIPTION: G 905 IS A 4'LONG REBAR
WITH ALUMINUM CAP AND IS LOCATED ON THE
EASTERLY SIDE OF ROUTE 48], 150± NORTHEAST
OF RM 4811/3301/2044, AND 4 FT EAST
OF THE EASTERLY EDGE OF THE ASPHALT SHOULDER

NYSPCS CENTRAL ZONE NAD 83/CORS 2011
N: 1104995.8570
E: 959885.7730



DESCRIPTION: G 906 IS A 4' LONG REBAR WITH ALUMINUM CAP AND IS LOCATED ON EASTERLY SIDE OF 481, AT THE NORTH EAST END OF THE BRIDGE OVER ROUTES 5 & 92, 25 FT EAST OF THE EASTERLY EDGE ON THE ASPHALT SHOULDER.

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 N: 1105768.5540 E: 960360.7450



I-481 - B STA. 2274+72.33

DESCRIPTION: B POINT 224 IS AN 18" LONG REBAR WITH CAP AND IS LOCATED ON ROUTE 481
600' ± NORTHEAST OF THE ROUTE 5
WEST RAMP

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 N: 1106573.2096 E: 960854.0032

All that piece or parcel of property designated as Parcel No. 81-4200-WOA, as shown on the accompanying map, to be acquired in Fee, without right of access to and from abutting property.

SUBJECT TO utility easements and right-of-ways of record heretofore conveyed affecting the above described properly.

I hereby certify that the property mapped above is necessary for this project, and the acquisition thereof is recommended.

Date NOVEMBER 17, 20 21

Beorge a. Doucatte gr.

George A. Doucette, Jr., P.E. Regional Design Engineer for the Regional Director of Transportation Region No. 3



"Unauthorized alteration of a survey map bearing a licensed land surveyor's seal is a violation of the New York State Education Law."

I hereby certify that this map was prepared in accordance with current NYSDOT policies, standards and procedures.

Date NOVEMBER 12 20 21

Prudent Engineering LLP
Engineering and Land Surveying
By Bradley G. Pcolinsky, Land Surveyor
L.S. License No. 050697

### NIAGARA MOHAWK POWER CORPORATION (REPUTED OWNER)

Map of property which the Commissioner of Transportation deems necessary to be acquired by appropriation in the name of the People of the State of New York in fee, without right of access to and from abutting property, except for the purposes of the rights described above, for purposes connected with the highway system of the State of New York pursuant to Sections 30 and 340-B of the Highway Law and the Eminent Domain Procedure Law.

There is excepted from this appropriation all the right, title and interest, if any, of the United States of America in or to said property.

Pursuant to the statute(s) set forth above and the authority delegated to me by Official Order of the Commissioner of Transportation, this acquisition map is hereby approved and filed in the main office of the New York State Department of Transportation.

I have compared the foregoing copy of the map with the original thereof, as filed in the Office of the State Department of Transportation, and I do hereby certify the same to be a true and correct copy of the original and the whole thereof.

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Office	Λf	Right.	-Af-WAY

Office	of	Right-of-Way
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### **Highway Boundary Plans**





### STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION

### HIGHWAY BOUNDARY PLAN

I-81 VIADUCT PROJECT PHASE 1, CONTRACT 2 P.I.N. 3501.91

> TOWNS OF DEWITT AND ONONDAGA. CITY OF SYRACUSE. COUNTY OF ONONDAGA, STATE OF NEW YORK

#### LEGEND

NYSDOT HIGHWAY BOUNDARY ( WITH ACCESS ) NYSDOT HIGHWAY BOUNDARY ( WITHOUT ACCESS ) APPROXIMATE HIGHWAY BOUNDARY ( WITHOUT ACCESS ) APPROXIMATE HIGHWAY BOUNDARY ( WITH ACCESS ) 2022 FEE WITHOUT ACCESS ( PROPOSED ACQUISITION ) 2022 FEE ( PROPOSED ACQUISITION ) 2022 PERMANENT EASEMENT ( PROPOSED ACQUISITION ) 2022 TEMPORARY EASEMENT ( PROPOSED ACQUISITION ) EXISTING PERMANENT EASEMENT SURVEY BASELINE APPROX. PROPERTY LINE PROPERTY LINE COMPUTED COORDINATE POINT COMPUTED RADIUS POINT COORDINATE FLE1133 FIELD LOCATED EVIDENCE COORDINATE POINT HISTORICAL ACQUISITION MAP & PARCEL NUMBER

3. SURVEY BASELINE POINT TIE SKETCHES SHOWN ON SHEETS (F.I.C. 64-7) SYRACUSE - FAYETTEVILLE S.H. 5587 (F.I.C. 64-7) HIGH BRIDGE ROAD

FOREST INTERCHANGE I.R. 505-3-2.101 I-81 / I-481 F.I.C. 64-7 (I-81) HALL AVE CITY OF **SYRACUSE** I.R. 505-3-2.100 🛊 F.I.C. 64-7 (I-81) TOWN OF **ONONDAGA** Southwood

NOTES:

(S.H. 76-2)

(F.I.S.H. 61-17)

(F.I.S.H. 68-5)

LARK RESERVA

STATE PA

I-481 / I-690 NTERCHANGE

Cedar Bay

I.R. 571-1-3 F.I.S.H. 68-5 (I-481)

▼ I.R. 570-1-5.12

.I.S.H. 68-4 (I-481 / I-690)

1. ALL COORDINATES LISTED HEREIN ARE REFERENCED TO NADB3(2011) - NEW YORK STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE. CONTROL REPORTS FOR ALL SURVEY BASELINES SHOWN ARE FILED WITH NEW YORK STATE DEPARTMENT OF TRANSPORTATION, REGION 3 SURVEY AND

3501.91 BRIDGES

ONONDAGA

TOWN:

VILLAGE: COUNTY:

2. POINT COORDINATE TABLES SHOWN ON SHEETS 21-24.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

.R. 571-1-2

East Syracuse

TOWN OF DEWITT



LOCATION PLANS (NOT TO SCALE)

STATE OF NEW YORK REGIONS & LOCATIONS OF REGIONAL OFFICES

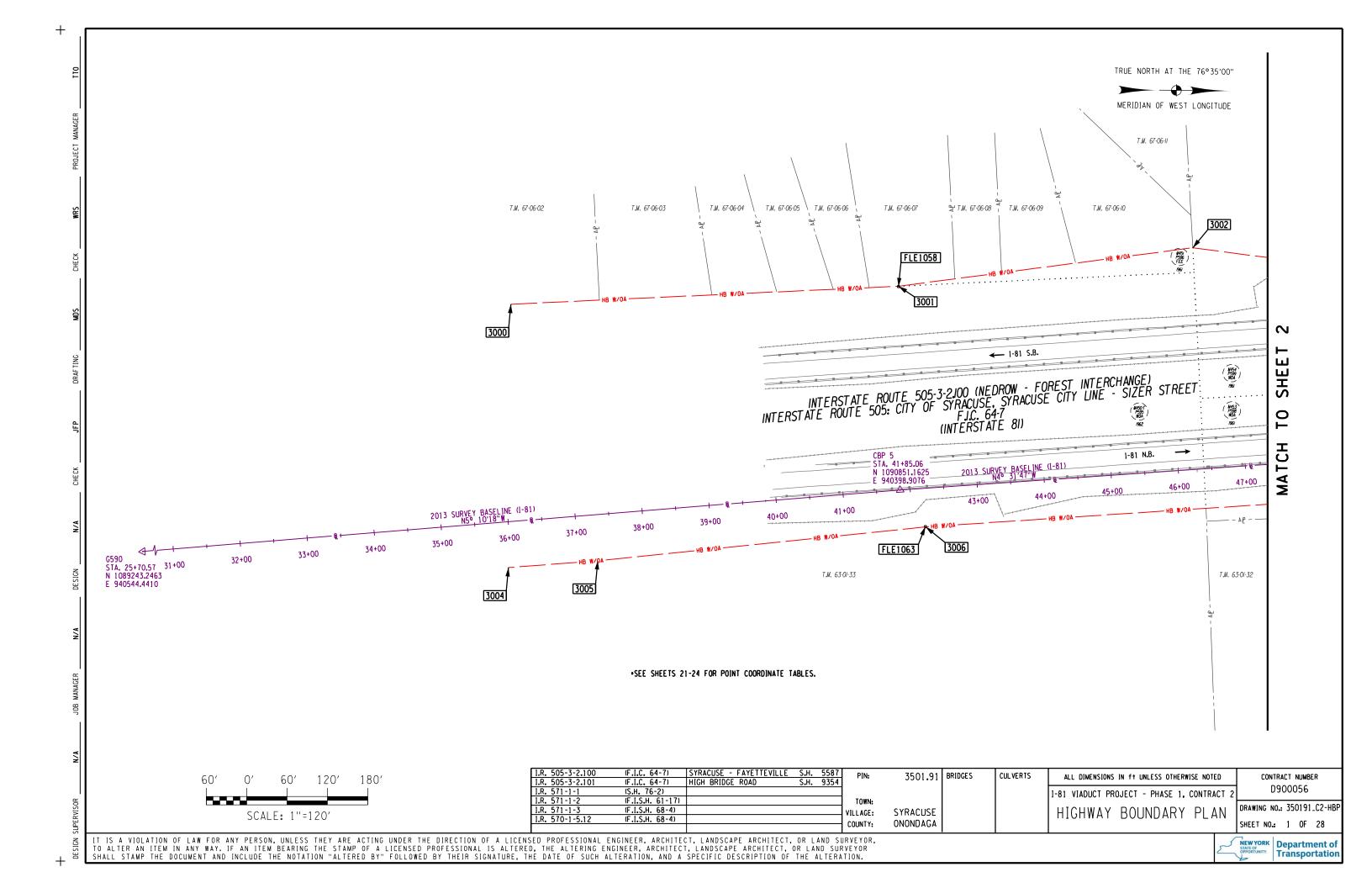
OF THE NYS DEPARTMENT

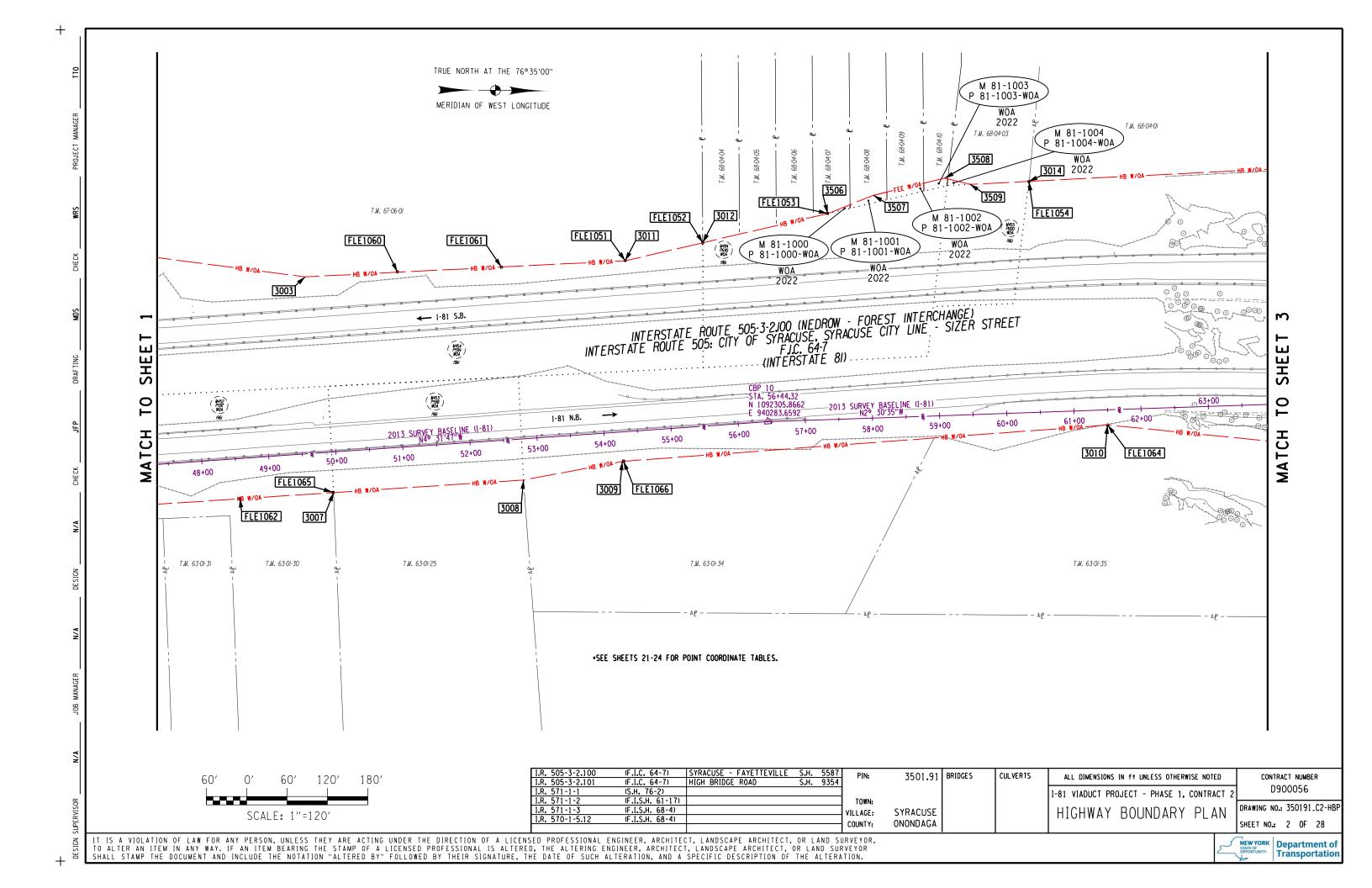
SITE LOCATION

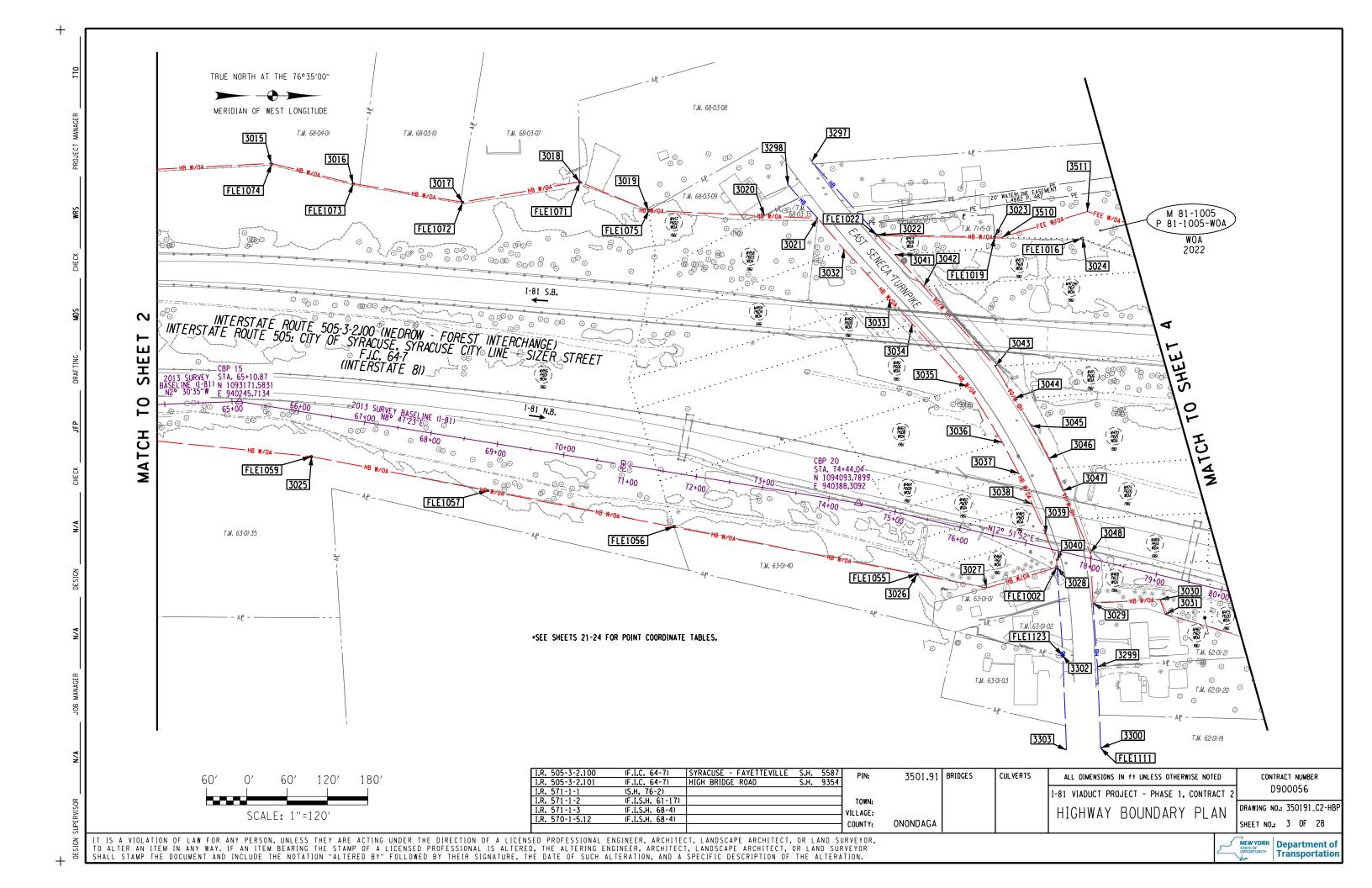
ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED I-81 VIADUCT PROJECT - PHASE 1. CONTRACT 2 HIGHWAY BOUNDARY PLAN

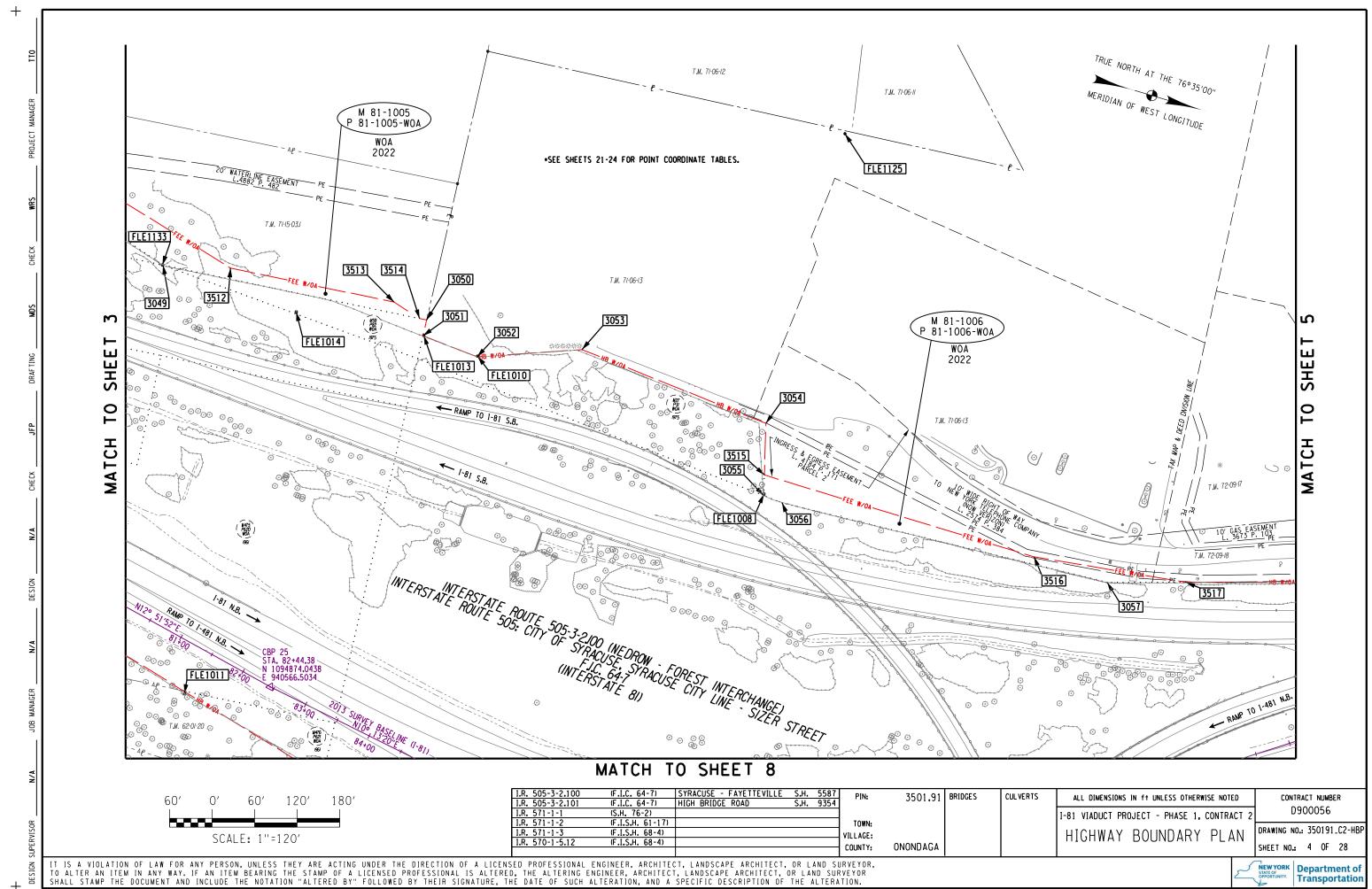
CONTRACT NUMBER D900056 DRAWING NO.: 350191\_C2-HBP

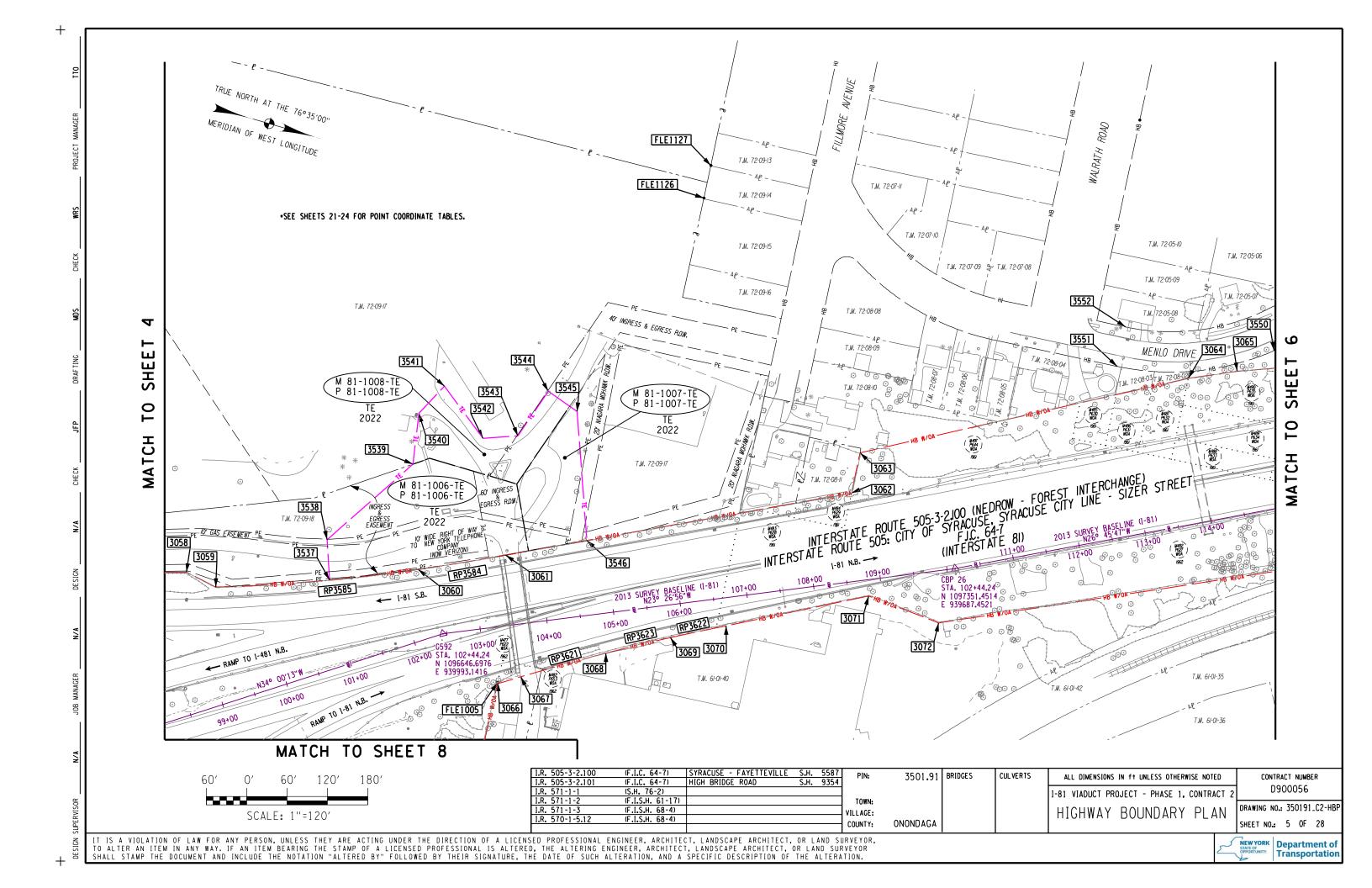
SHEET NO.: C1

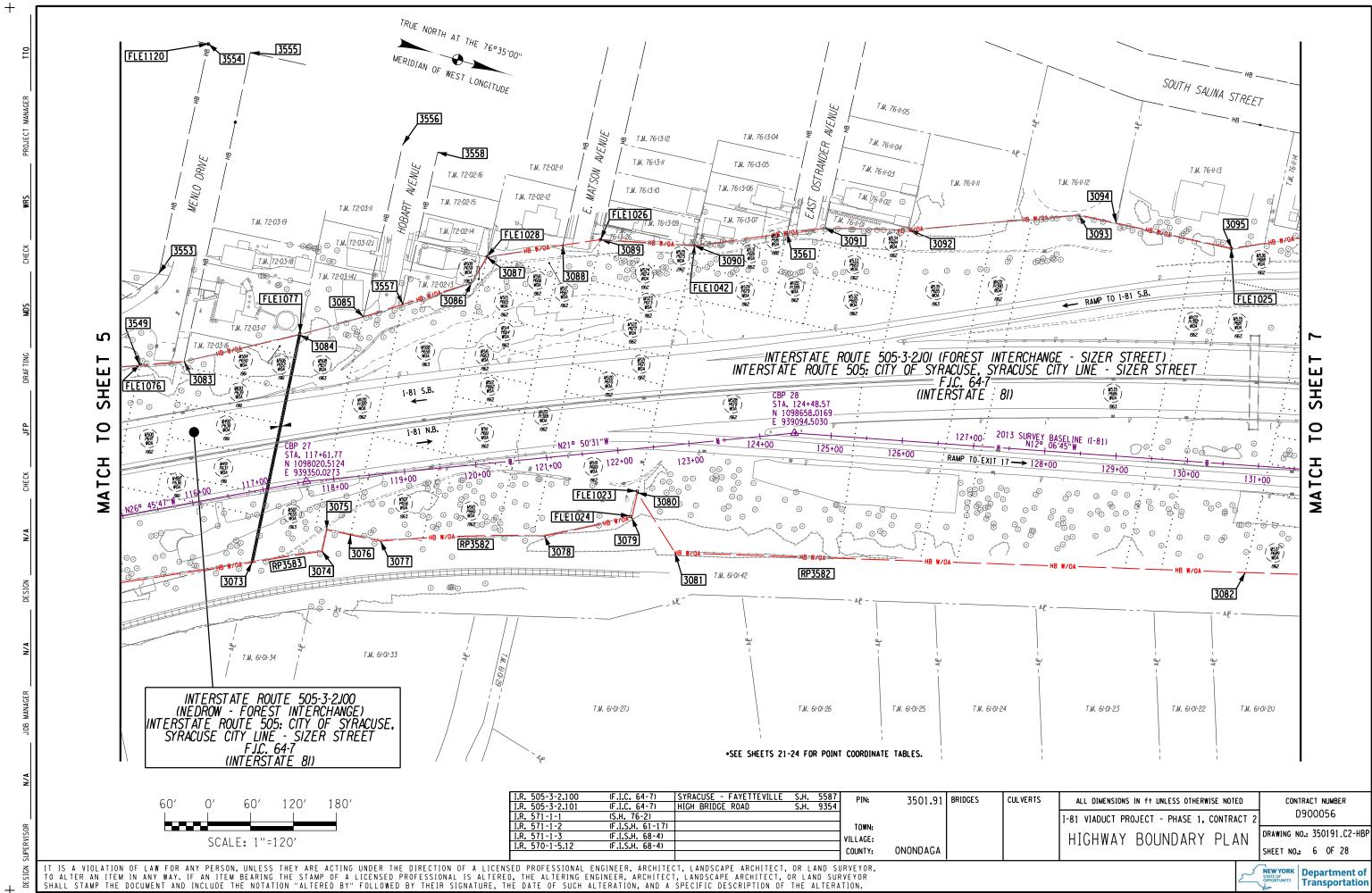


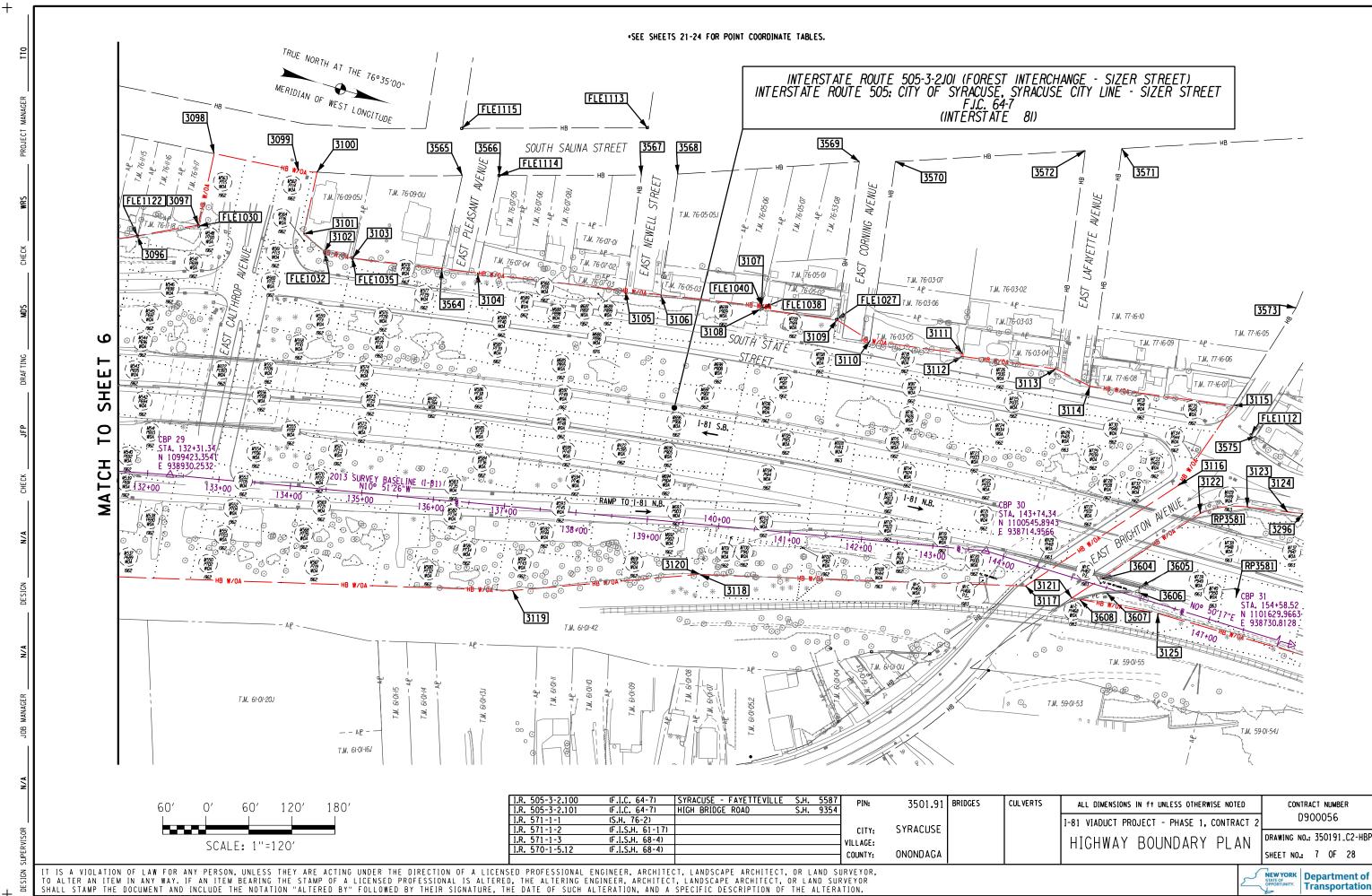


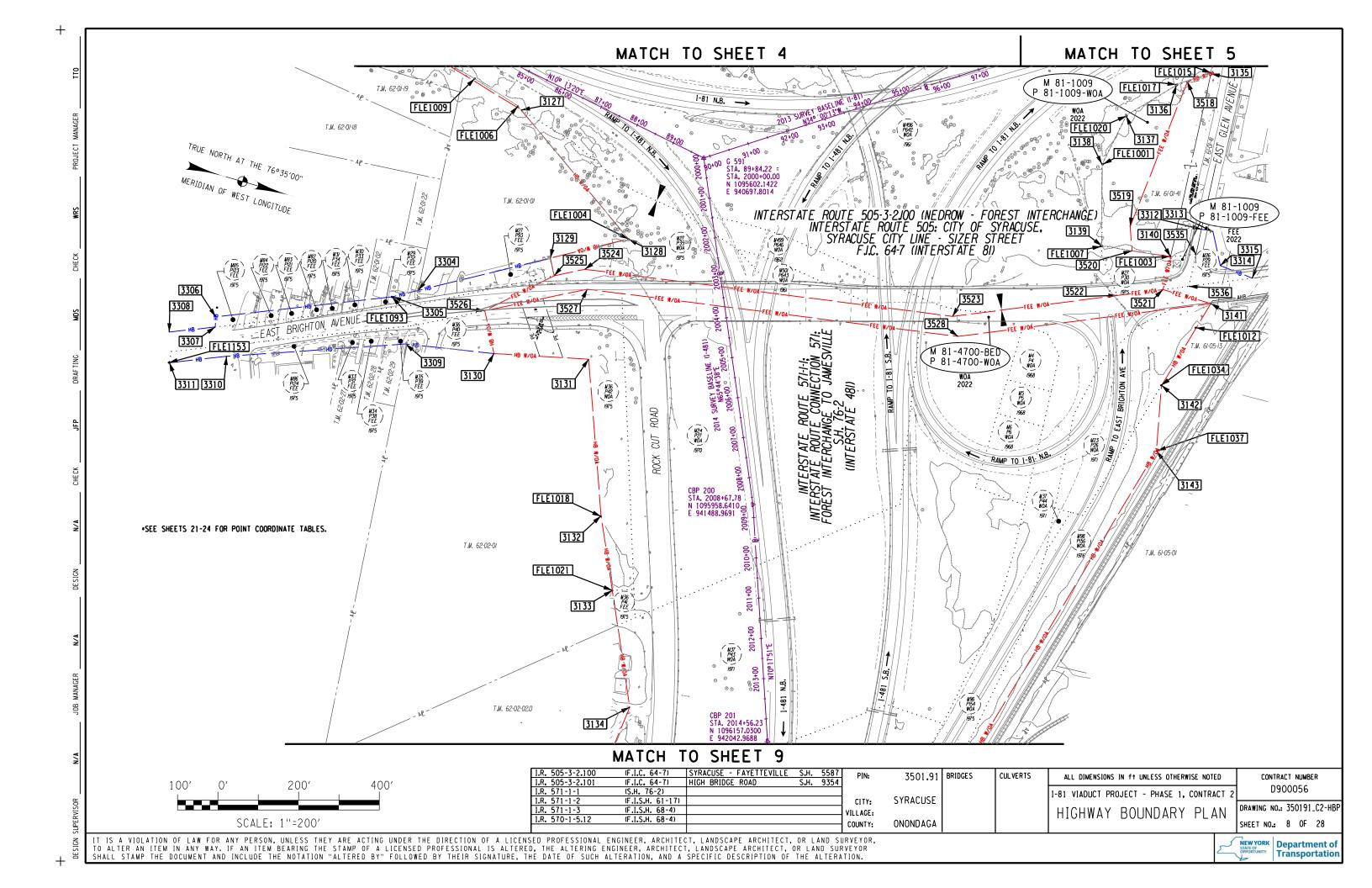


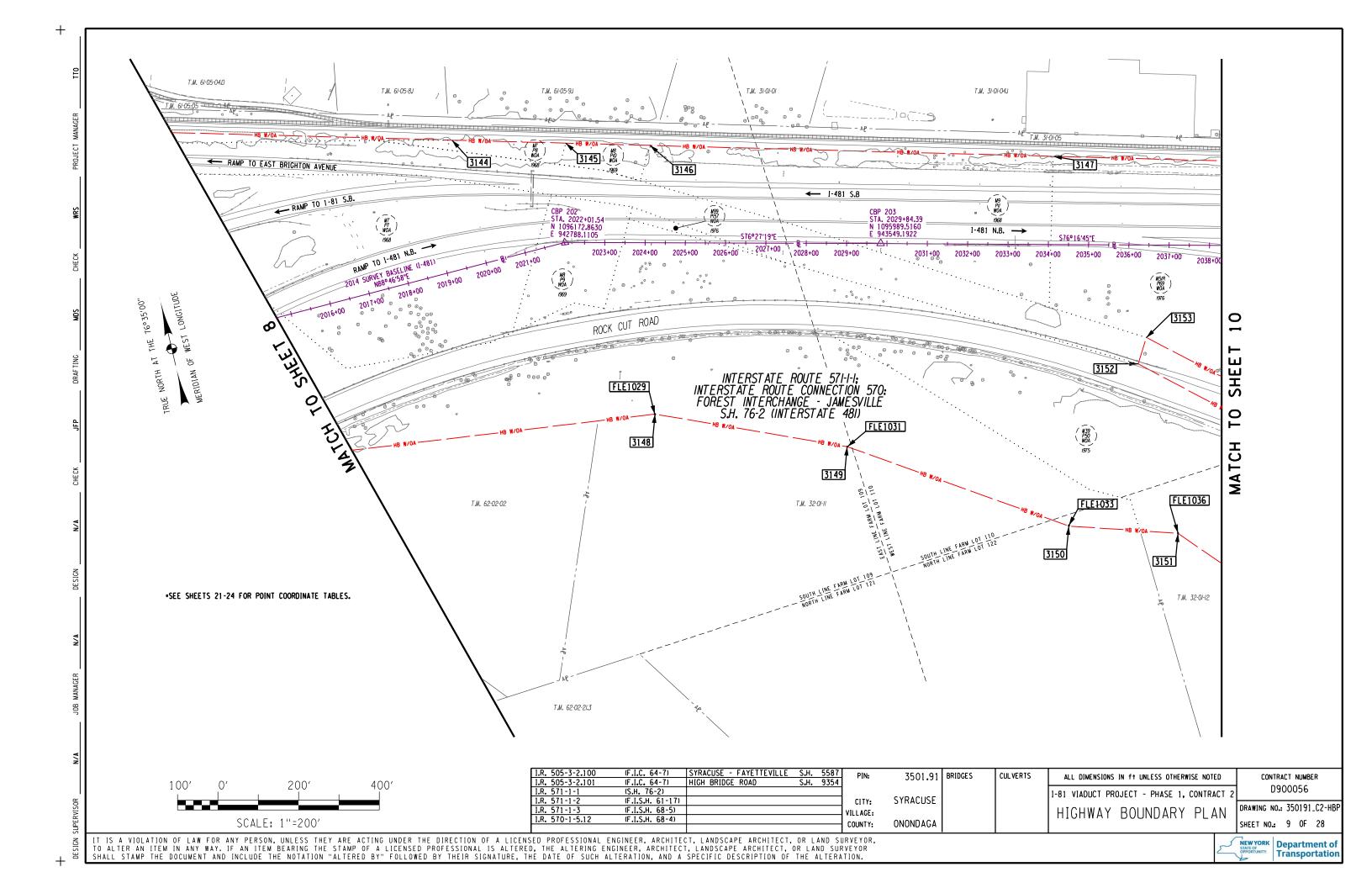


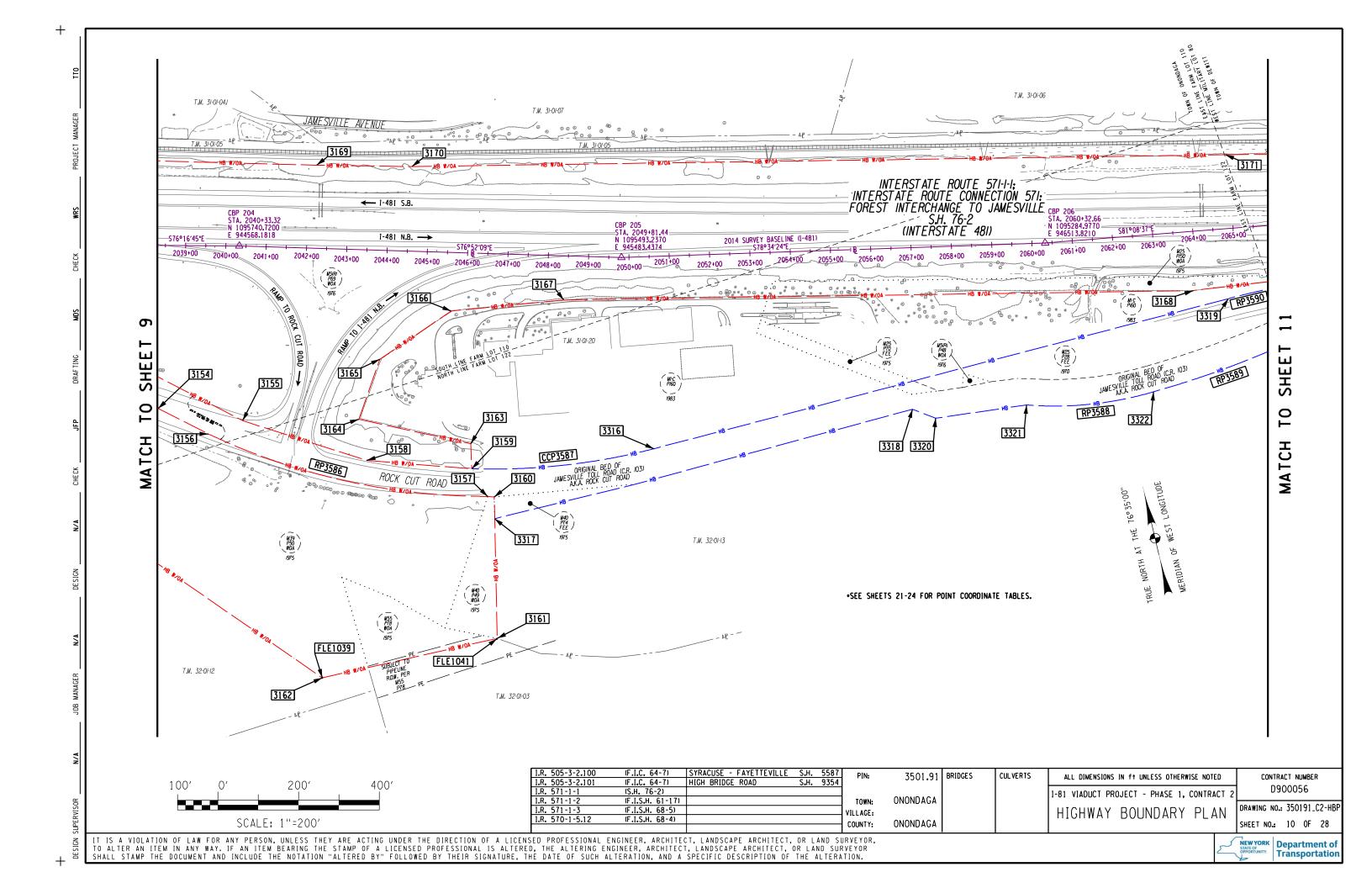


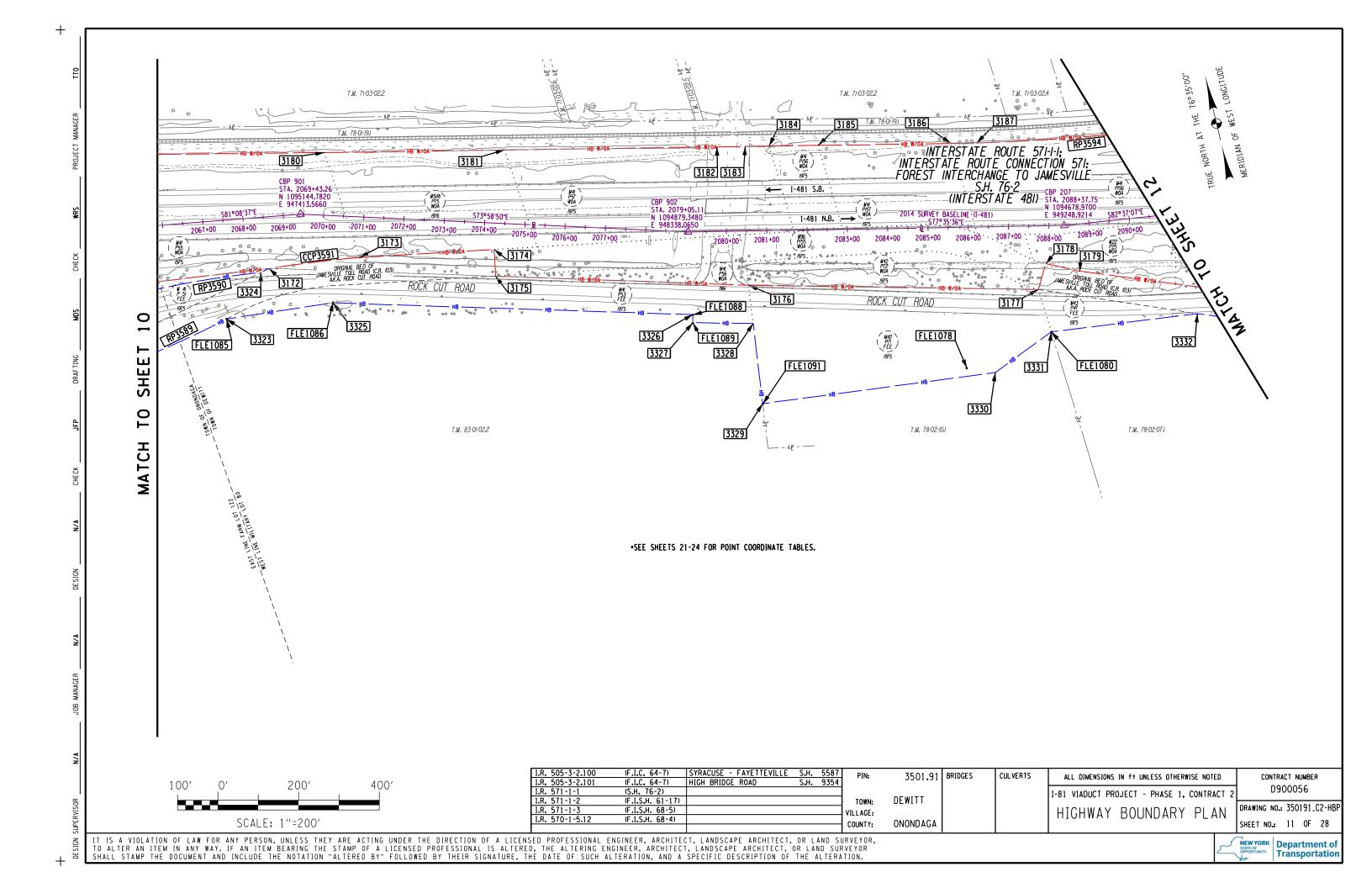


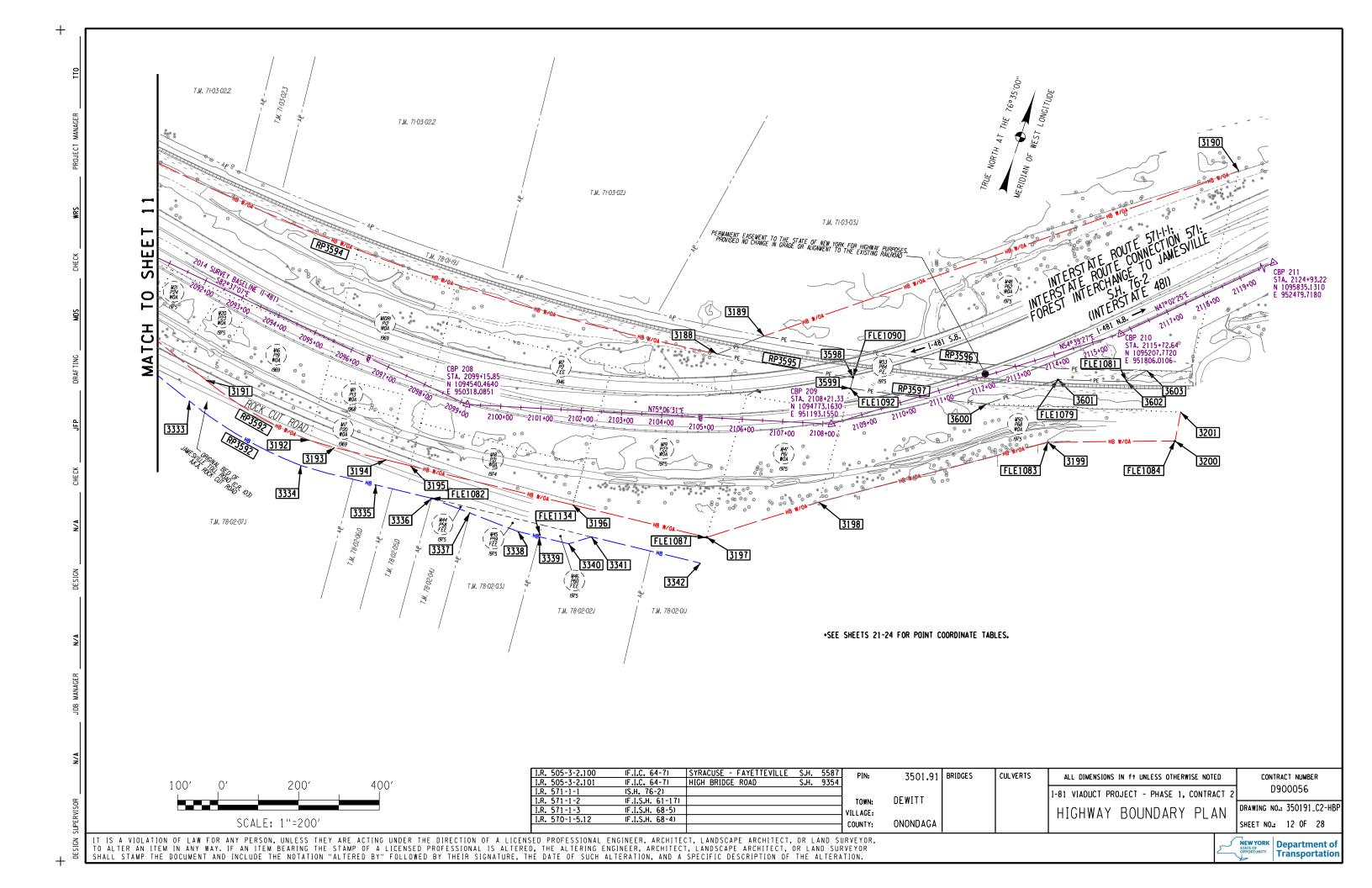


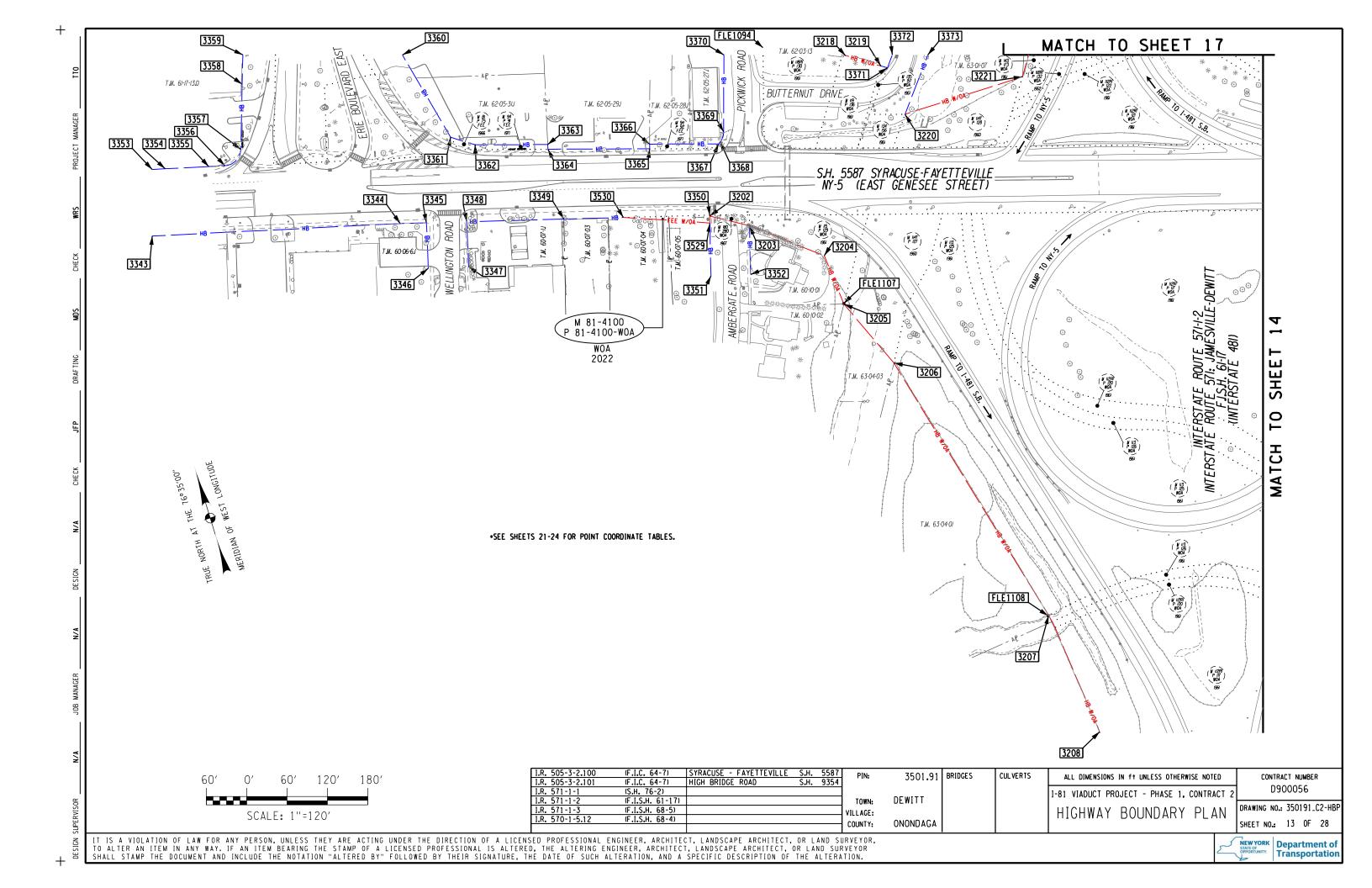


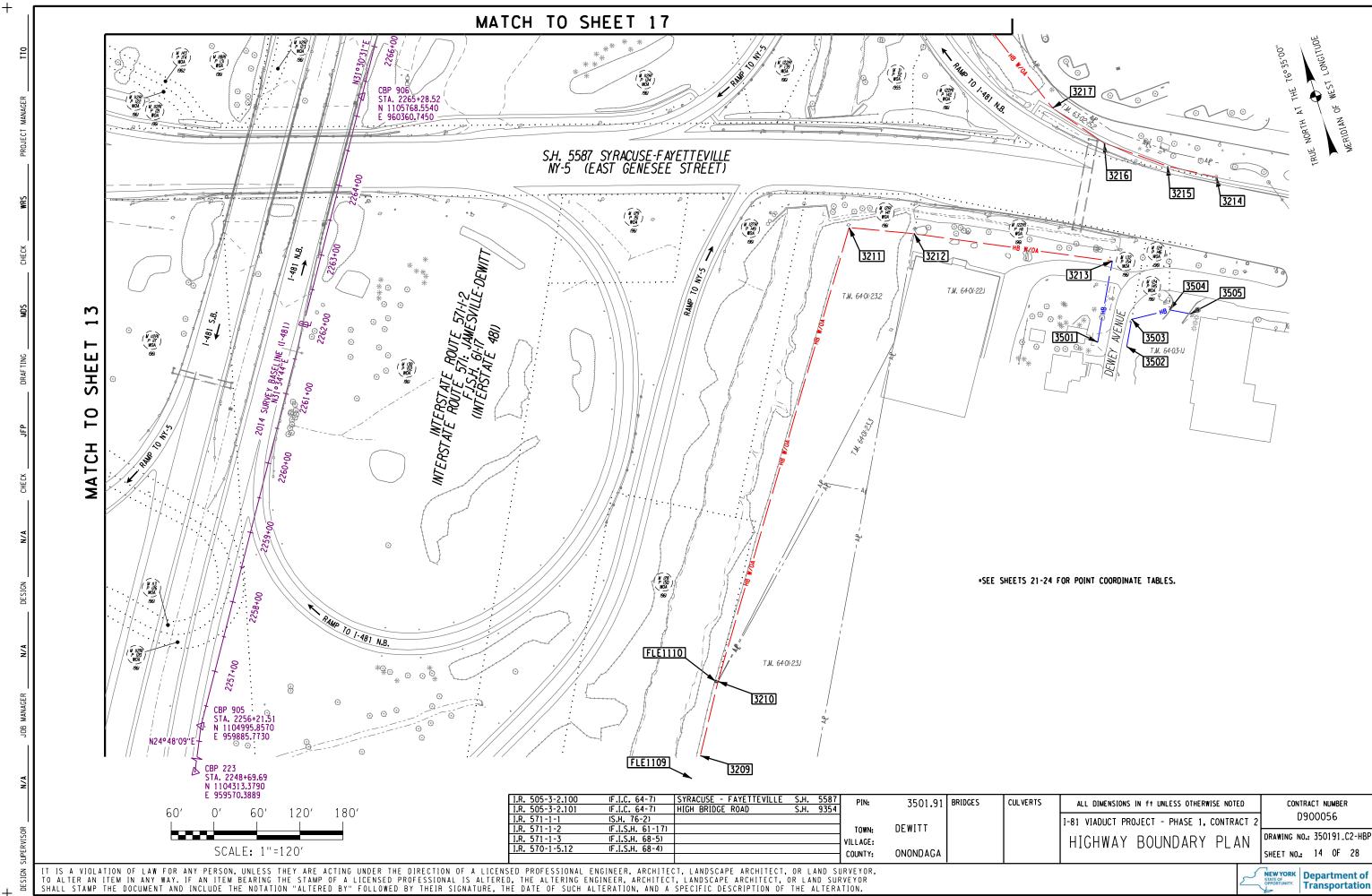


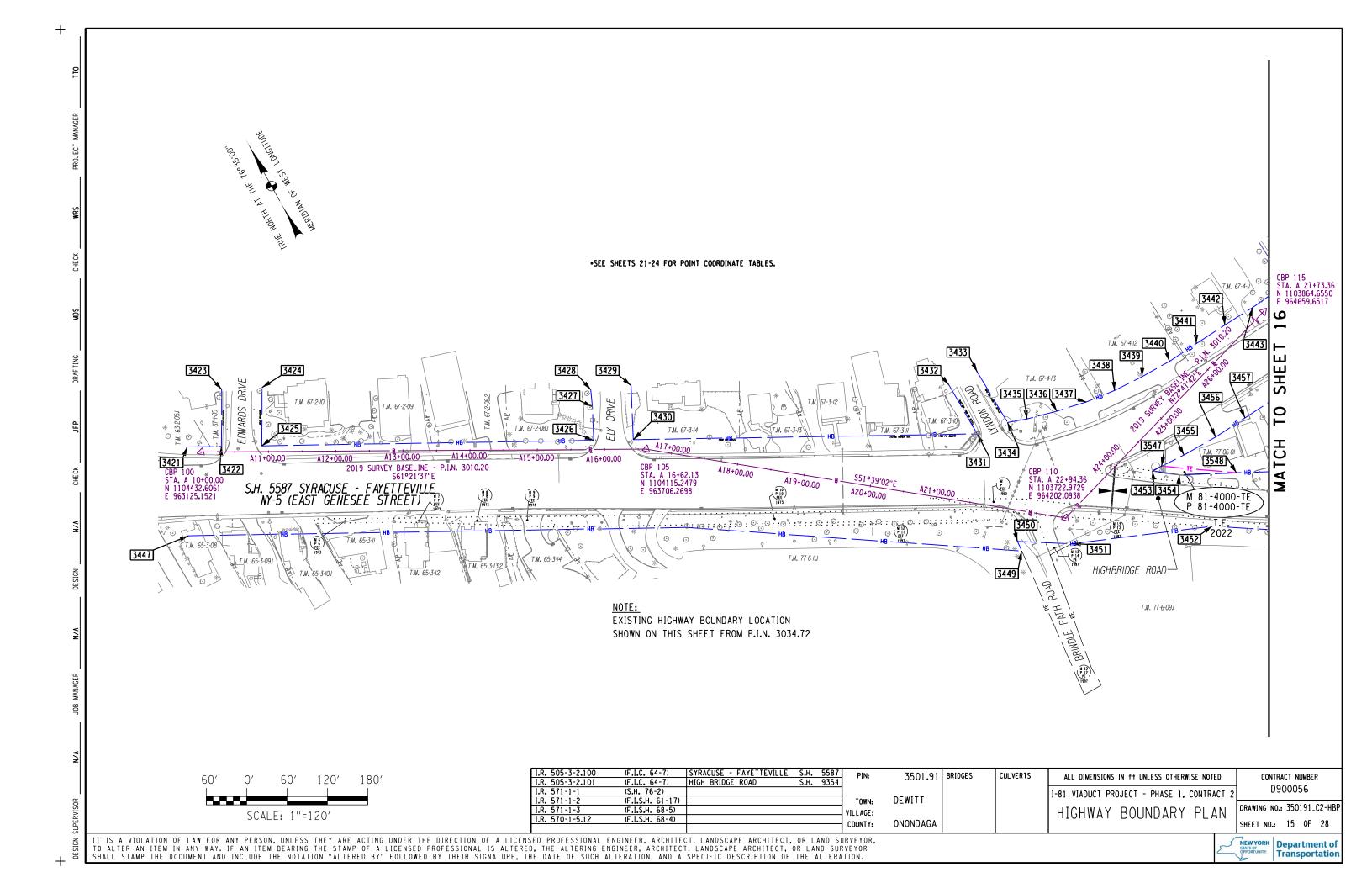


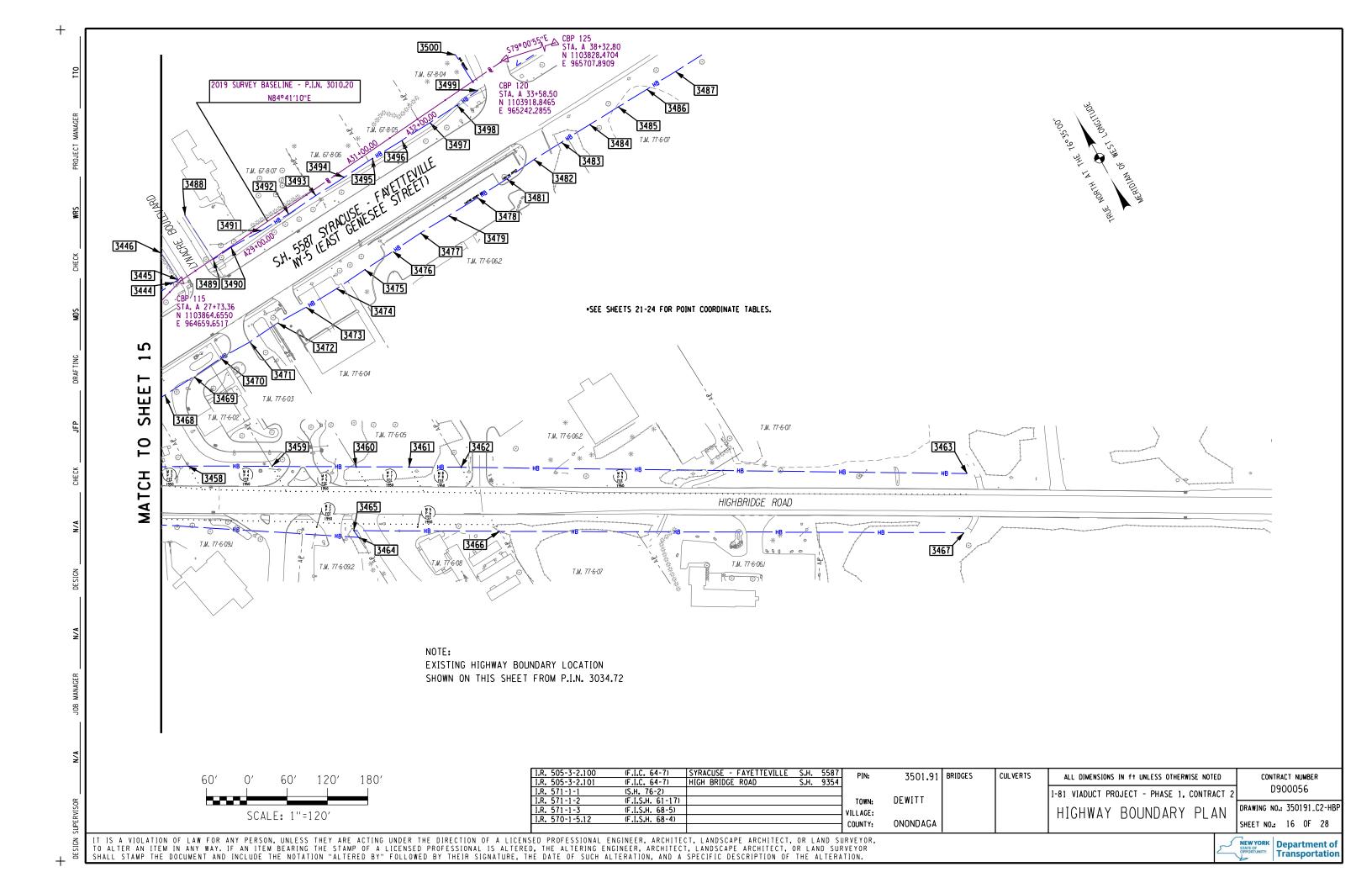


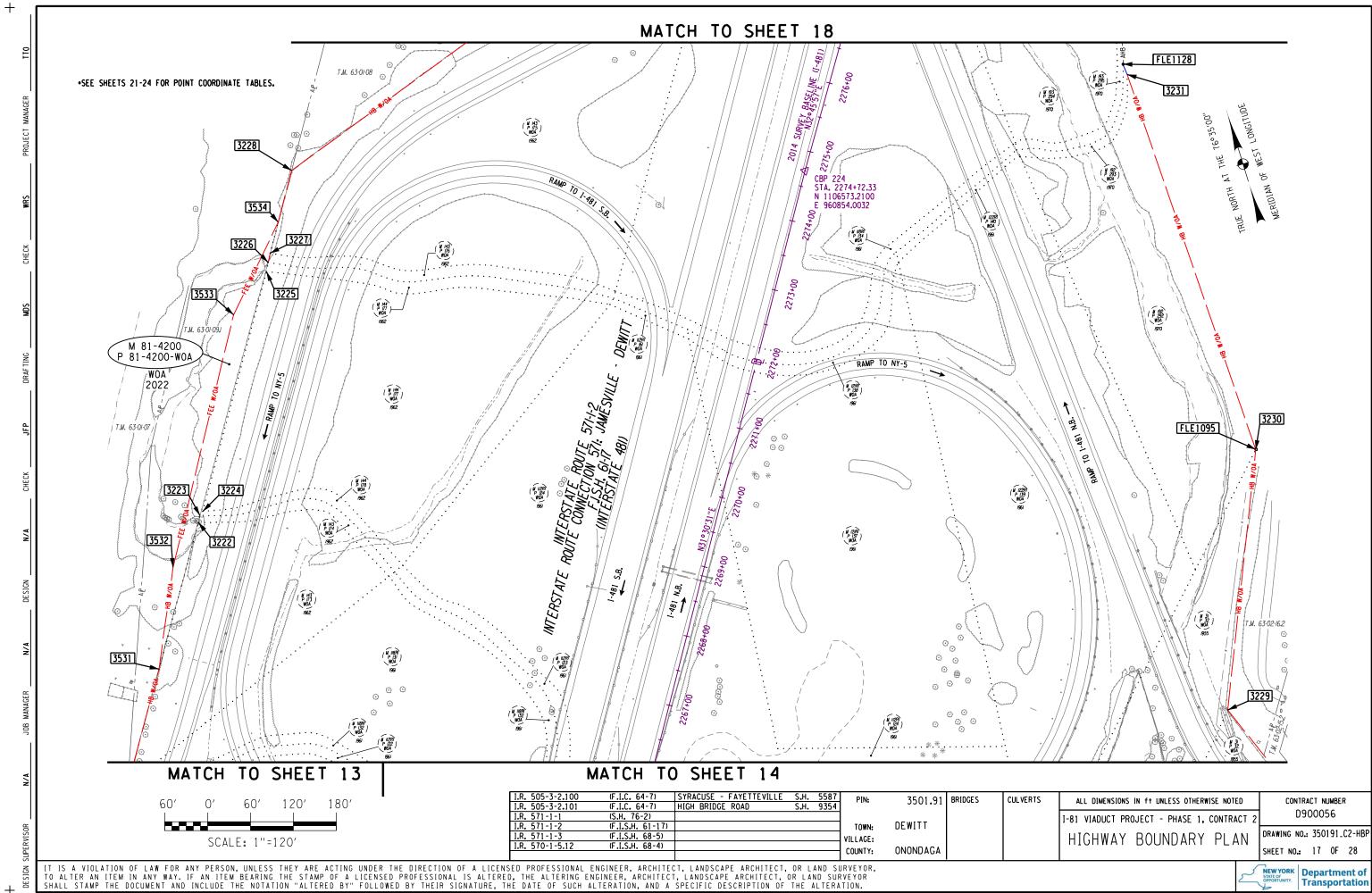


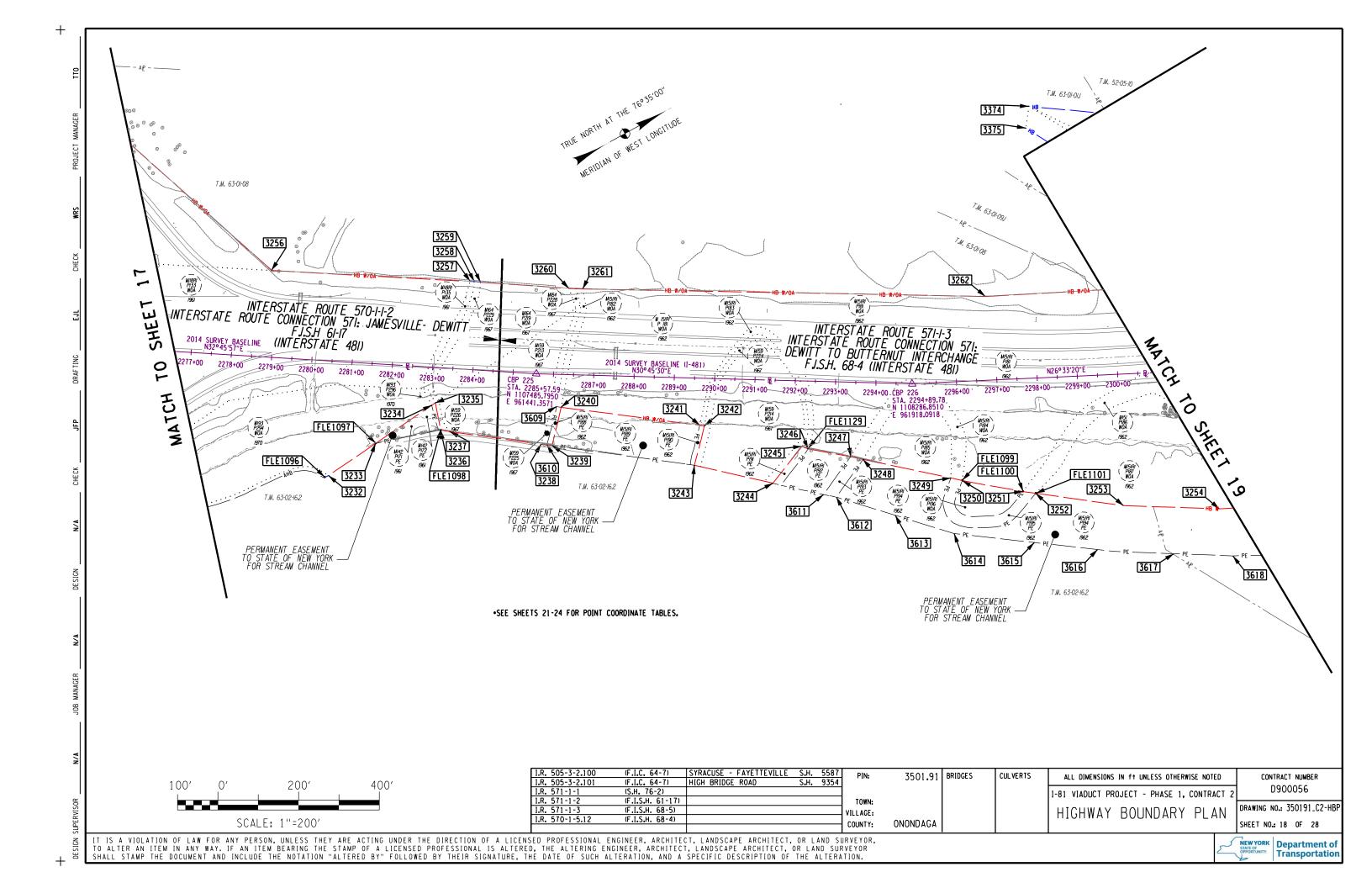


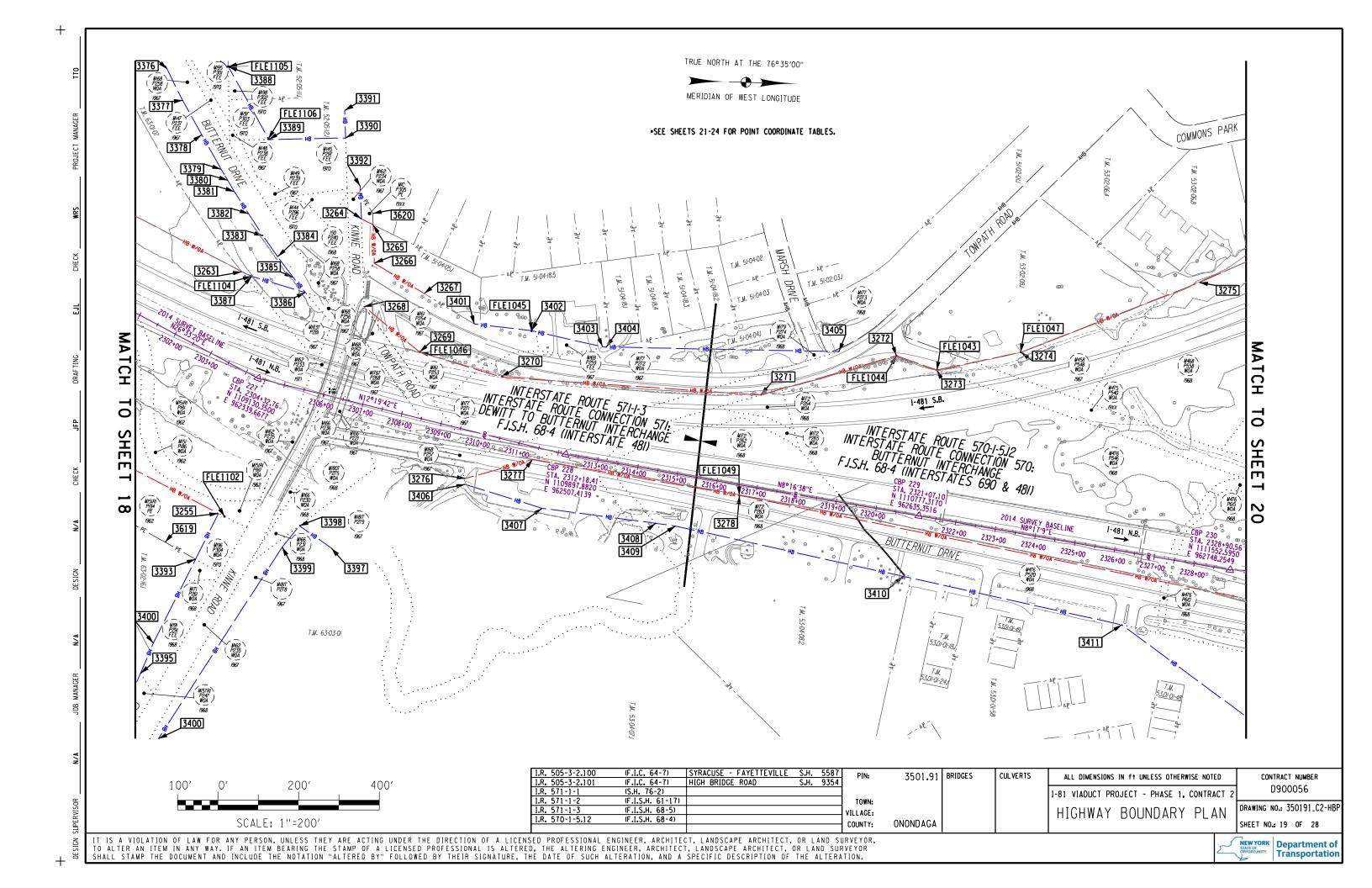


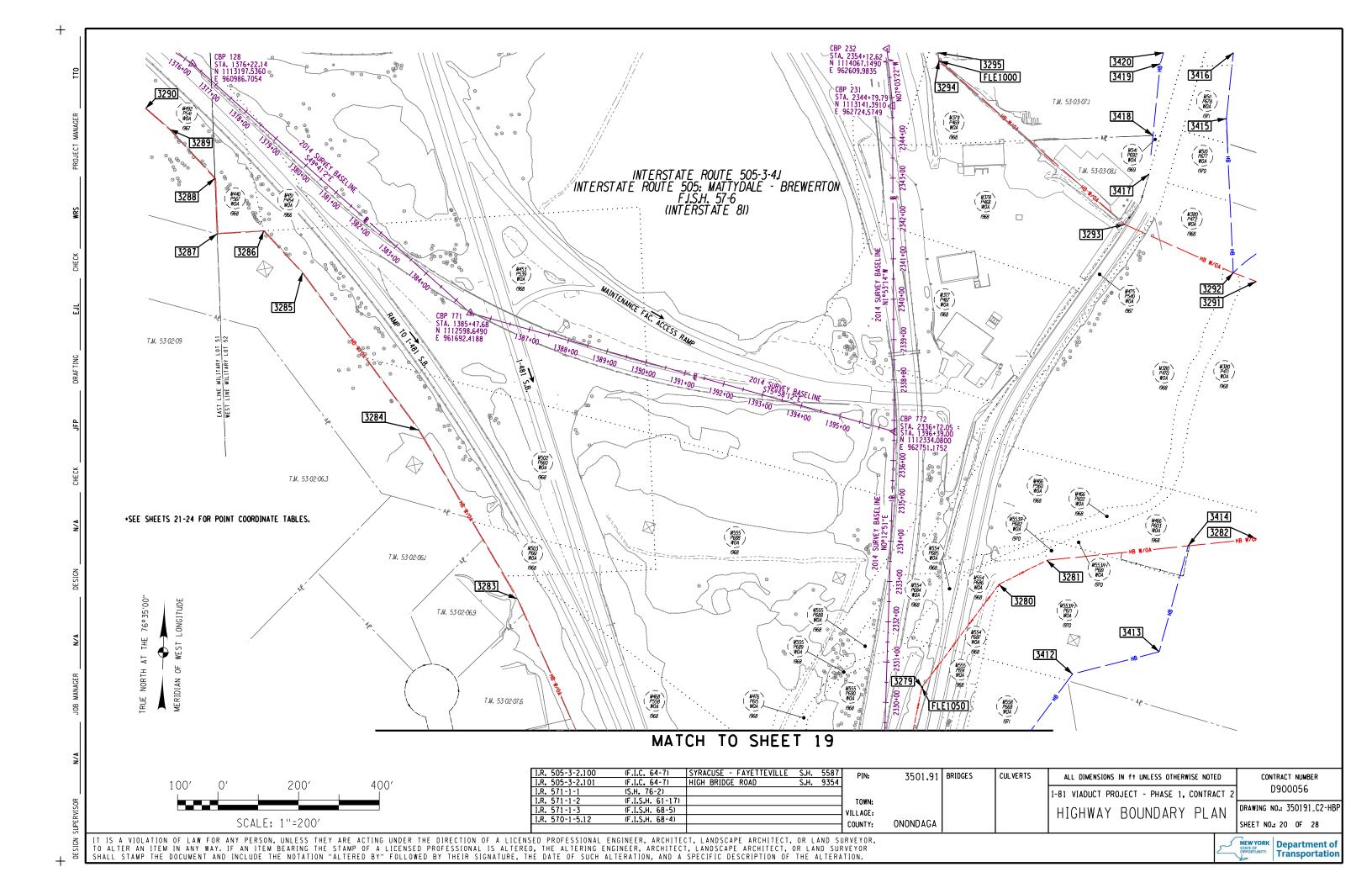












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POINT	NORTHING	EASTING	DESCRIPTION
1000	1113255.094	962837.515	NYS ROW MON.
1001	1096556.300	940436.901	NYS ROW MON.
1002 1003	1094389.989 1096781.383	940480.717 940609.799	NYS ROW MON. NYS ROW MON.
1003	1095478.473	940942.516	NYS ROW MON.
1004	1096745.078	940040.033	NYS ROW MON.
1006	1095123.730	940703.400	NYS ROW MON.
1007	1096611.143	940632.326	NYS ROW MON.
1008	1095467.411	940110.591	NYS ROW MON.
1009	1095001.747	940667.052	NYS ROW MON.
1010	1095025.027	940036.071	NYS ROW MON.
1011	1094760.192	940609.328	NYS ROW MON.
1012	1096890.953	940761.802	NYS ROW MON.
1013	1094943.661	940029.164	NYS ROW MON.
1014	1094761.603	940047.460	NYS ROW MON.
1015	1096751.479	940144.741	NYS ROW MON.
1016	1094422.970	939991.318	NYS ROW MON.
1017	1096679.022	940196.803	NYS ROW MON.
1018	1095604.981	941621.880	NYS ROW MON.
1019	1094292.721	939991.165	NYS ROW MON.
1020	1096579.837	940305.164	NYS ROW MON.
1021	1095682.857	941790.633	NYS ROW MON.
1022	1094117.897	939989.506	NYS ROW MON.
1023	1098469.344	939234.121	NYS ROW MON.
1024	1098469.747	939270.701	NYS ROW MON.
1025 1026	1099173.251 1098321.604	938675.765 938909.974	NYS ROW MON. NYS ROW MON.
1026	1100255.890	938463.270	NYS ROW MON.
1027	1098175.695	938977.267	NYS ROW MON.
1029	1095707.245	942906.503	NYS ROW MON.
1030	1099365.073	938585.819	NYS ROW MON.
1031	1095518.443	943352.075	NYS ROW MON.
1032	1099543.833	938571.508	NYS ROW MON.
1033	1095201.124	943841.381	NYS ROW MON.
1034	1096848.564	940922.870	NYS ROW MON.
1035	1099583.424	938568.764	NYS ROW MON.
1036	1095120.028	944100.254	NYS ROW MON.
1037	1096884.210	941081.145	NYS ROW MON.
1038	1100151.525	938477.882	NYS ROW MON.
1039	1094651.567	944520.666	NYS ROW MON.
1040	1100150.673	938474.318	NYS ROW MON.
1041	1094645.407	944964.225	NYS ROW MON.
1042	1098450.293	938880.917	NYS ROW MON.
1043	1110812.459	962272.887	NYS ROW MON.
1044	1110711.291	962240.027	NYS ROW MON.
1045	1109805.064 1109528.584	962203.896 962263.623	NYS ROW MON.
1046 1047	1111018.841	962223.623	NYS ROW MON. NYS ROW MON.
1047	1111018.841	962596.590	NYS ROW MON.
1050	1111702.148	962837.424	NYS ROW MON.
1050	1092091.273	940046.167	NYS ROW MON.
1051	1092206.555	940018.345	NYS ROW MON.
1053	1092391.776	939973.158	NYS ROW MON.
1054	1092690.932	939923.084	NYS ROW MON.
1055	1094182.261	940492.920	NYS ROW MON.
1056	1093820.137	940425.582	NYS ROW MON.
1057	1093542.639	940374.574	NYS ROW MON.
1058	1090845.856	940096.432	NYS ROW MON.
1059	1093279.519	940326.659	NYS ROW MON.
1060	1091752.700	940066.007	NYS ROW MON.
1061	1091907.308	940057.567	NYS ROW MON.
1062	1091521.383	940405.561	NYS ROW MON.
1063	1090889.318	940452.994	NYS ROW MON.
1064	1092811.523	940284.047	NYS ROW MON.
1065	1091660.177	940394.988	NYS ROW MON.
1066	1092091.711	940344.378	NYS ROW MON.

POINT	POINT NUM NORTHING	EASTING	DESCRIPTION
1071	1093675.428	939914.879	NYS ROW MON.
1071	1093500.999	939946.341	NYS ROW MON.
1073	1093338.096	939920.382	NYS ROW MON.
1073	1093336.090	939891.988	NYS ROW MON.
	1093216.390	939955.562	
1075			NYS ROW MON.
1076	1097751.084	939257.331	NYS ROW MON.
1077	1097953.857	939153.491	NYS ROW MON.
1078	1094390.596	948932.132	NYS ROW MON.
1079	1095051.587	951693.213	NYS ROW MON.
1080	1094429.712	949157.043	NYS ROW MON.
1081	1095100.509	951856.432	NYS ROW MON.
1082	1094292.016	950307.447	NYS ROW MON.
1083	1094896.412	951716.930	NYS ROW MON.
1084	1094996.423	952015.858	NYS ROW MON.
1085	1094934.671	947175.061	NYS ROW MON.
1086	1094912.927	947441.383	NYS ROW MON.
1087	1094410.176	950985.313	NYS ROW MON.
1088	1094676.648	948302.432	NYS ROW MON.
1089	1094657.395	948297.465	NYS ROW MON.
1090	1094899.909	951207.955	NYS ROW MON.
1091	1094421.764	948419.699	NYS ROW MON.
1092	1094871.701	951210.511	NYS ROW MON.
1093	1094955.953	941243.927	NYS ROW MON.
1094	1106188.686	959336.966	NYS ROW MON.
1095	1106013.241	961341.217	NYS ROW MON.
1096	1106902.516	961408.106	NYS ROW MON.
1097	1107054.238	961397.175	NYS ROW MON.
1098	1107210.994	961446.971	NYS ROW MON.
1099	1108279.281	962187.351	NYS ROW MON.
1100	1108396.782	962284.966	NYS ROW MON.
1101	1108422.469	962304.270	NYS ROW MON.
1102	1109056.654	962684.331	NYS ROW MON.
1103	1108764.575	963316.612	NYS ROW MON.
1103	1109107.590	962087.116	NYS ROW MON.
1104	1109107.390	961569.170	NYS ROW MON.
1106	1109034.963	961746.138	NYS ROW MON.
1107	1105789.310	959338.905	NYS ROW MON.
1107	1105769.310	959491.203	NYS ROW MON.
1109	1104722.297	960518.095	NYS ROW MON.
1110	1104841.788	960590.141	NYS ROW MON.
1111	1094457.835	940748.973	NYS ROW MON.
1112	1100855.986	938456.716	CITY STREET MON
1113	1099927.981	938279.836	CITY STREET MON
1114	1099747.845	938401.484	CITY STREET MON
1115	1099679.289	938352.910	CITY STREET MON
1116	1098573.193	938364.018	CITY STREET MON
1117	1098270.372	938287.337	CITY STREET MON
1118	1098289.008	938349.006	CITY STREET MON
1119	1098354.801	938357.178	CITY STREET MON
1120	1097717.885	938799.711	CITY STREET MON
1121	1097019.732	938849.587	CITY STREET MON
1122	1099286.744	938623.043	IRON PIPE
1123	1094400.371	940611.907	IRON PIPE
1124	1095991.578	939270.224	IRON PIPE
1125	1095435.407	939589.695	IRON PIPE
1126	1096838.942	939262.502	IRON PIPE
1127	1096835.302	939213.173	IRON PIPE
1128	1106583.629	961323.583	IRON PIPE
1129	1107984.860	961931.545	IRON PIPE
1130	1094918.520	939618.460	IRON ROD
1131	1095973.230	939272.798	IRON ROD
1132	1093973.230	939810.053	IRON ROD
1133	1094929.376	940036.509	IRON ROD
1133	1094289.080	950590.171	IRON ROD
1135	1094269.060	941554.770	IRON ROD
1157	HIMAANY AN /	941224 / /U	

POINT	NORTHING	BER COORDINATE TA EASTING	DESCRIPTION
3000	1090269.693	940128.109	HWY. BDY. WOA
3001	1090846.109	940095.771	HWY. BDY. WOA
3002	1091283.224	940034.570	HWY. BDY. WOA
3003	1091615.347	940074.801	HWY. BDY. WOA
3004	1090269.693	940519.718	HWY. BDY. WOA
3005	1090402.474	940508.166	HWY. BDY. WOA
3006	1090889.805	940453.324	HWY. BDY. WOA
3007	1091660.719	940395.189	HWY. BDY. WOA
3008	1091943.171	940373.890	HWY. BDY. WOA
3009	1092089.625	940344.825	HWY. BDY. WOA
3010	1092811.106	940283.888	HWY. BDY. WOA
3011	1092091.534	940046.416	HWY. BDY. WOA
3012	1092206.556	940018.425	HWY. BDY. WOA
3013	1092570.370	939929.910	HWY. BDY. WOA
3014	1092690.523	939922.672	HWY. BDY. WOA
3015	1093215.817	939891.061	HWY. BDY. WOA
3016	1093337.787	939919.676	HWY. BDY. WOA
3017	1093500.679	939945.959	HWY. BDY. WOA
3018	1093675.046	939914.362	HWY. BDY. WOA
3019	1093777.629	939955.879	HWY. BDY. WOA
3020	1093777.629	939962.319	HWY. BDY. WOA
3020			
	1094029.525	939965.205	HWY. BDY. WOA
3022	1094117.908	939988.839	HWY. BDY. WOA
3023	1094292.873	939990.714	HWY. BDY. WOA
3024	1094424.041	939992.115	HWY. BDY. WOA
3025	1093279.956	940326.476	HWY. BDY. WOA
3026	1094182.296	940493.250	HWY. BDY. WOA
3027	1094285.990	940512.415	HWY. BDY. WOA
3028	1094390.392	940480.944	HWY. BDY. WOA
3029	1094444.412	940533.849	HWY. BDY. WOA
3030	1094544.227	940527.391	HWY. BDY. WOA
3031	1094552.329	940549.281	HWY. BDY. WOA
3032	1094068.878	940010.878	HWY. BDY. WOA
3033	1094138.281	940084.211	HWY. BDY. WOA
3034	1094171.853	940120.938	HWY. BDY. WOA
3035	1094255.753	940212.739	HWY. BDY. WOA
3036	1094307.559	940295.930	HWY. BDY. WOA
3037	1094332.306	940341.534	HWY. BDY. WOA
3038	1094352.794	940387.126	HWY. BDY. WOA
3039	1094373.156	940432.397	HWY. BDY. WOA
3040	1094389.839	940471.649	HWY. BDY. WOA
3041	1094144.675	940018.133	HWY. BDY. WOA
3042	1094188.305	940065.238	HWY, BDY, WOA
3043	1094295.884	940183.022	HWY, BDY, WOA
3043	1094325.114	940229.975	HWY. BDY. WOA
3045	1094325.114	940229.975	HWY. BDY. WOA
3046	1094376.481	940271.144	HWY. BDY. WOA
	100100=0=0	0.100//.014	
3047	1094397.979	940366.911	HWY. BDY. WOA
3048	1094439.794	940459.268	HWY. BDY. WOA
3049	1094562.185	940036.436	HWY. BDY. WOA
3050	1094941.471	940007.210	HWY. BDY. WOA
3051	1094942.782	940030.050	HWY. BDY. WOA
3052	1095024.362	940037.291	HWY. BDY. WOA
3053	1095163.821	939986.104	HWY. BDY. WOA
3054	1095442.166	940013.761	HWY. BDY. WOA
3055	1095467.788	940112.651	HWY. BDY. WOA
3056	1095495.398	940115.262	HWY. BDY. WOA
3057	1095967.776	940095.069	HWY. BDY. WOA
3058	1096254.669	940011.469	HWY. BDY. WOA
3059	1096302.513	940020.651	HWY. BDY. WOA
3060	1096584.407	939911.464	HWY. BDY. WOA
3061	1096703.516	939854.718	HWY. BDY. WOA
3062	1097171.968	939622.572	HWY. BDY. WOA
3063	1097167.333	939561.775	HWY. BDY. WOA

I.R. 505-3-2.100	(F.I.C. 64-7)	SYRACUSE - FAYETTEVILLE	S <b>.</b> H.	5587	PIN:	3501.91	BRIDGES	CULVERTS	ALL DIMENSI
I.R. 505-3-2.101	(F.I.C. 64-7)	HIGH BRIDGE ROAD	S.H.	9354	1 '.''	3301.31	DIVIDUES	*************************************	ALL DIMENSI
I.R. 571-1-1	(S.H. 76-2)				1				I-81 VIADUCT
I.R. 571-1-2	(F.I.S.H. 61-17)				TOWN:				1 01 1140001
I.R. 571-1-3	(F.I.S.H. 68-4)				VILLAGE:				HIGHWA
I.R. 570-1-5.12	(F.I.S.H. 68-4)					ONONDAGA			I IIIOIIWA
					COUNTY:	UNUNDAGA			

ALL DIMENSIONS IN 11 UNLESS OTHERWISE NOTED

BY VIADUCT PROJECT - PHASE 1, CONTRACT 2

HIGHWAY BOUNDARY PLAN

CONTRACT NUMBER

D900056

DRAWING NO.: 350191\_C2-HBP

SHEET NO.: 21 0F 28

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



+	PROJECT MANAGER TIO	
	WRS	
	- CHECK	
	MDS	
	DRAF TING	
	JFP	
	CHECK	
	N/A	
	DESIGN	
	N/A	
	JOB MANAGER	
	N/A	
	VISOR	

DOINT		IBER COORDINATE TA	
POINT	NORTHING	EASTING	DESCRIPTION
3065	1097672.584	939288.879	HWY. BDY. WOA
3066	1096745.078	940040.033	HWY. BDY. WOA
3067	1096775.678	940022.401	HWY. BDY. WOA HWY. BDY. WOA
3068	1096887.258	939953.396	HWY, BDY, WOA
3069	1096973.333 1097047.793	939904.257 939864.564	HWY. BDY. WOA
3070 3071	1097047.793	939762.756	HWY. BDY. WOA
	1097259.046	939771.974	HWY. BDY. WOA
3072 3073	1097978.912	939480.620	HWY. BDY. WOA
3073	1098069.236	939437.944	HWY. BDY. WOA
3075	1098066.872	939407.312	HWY. BDY. WOA
3076	1098100.561	939404.813	HWY. BDY. WOA
3077	1098143.433	939401.648	HWY. BDY. WOA
3078	1098362.239	939330.445	HWY. BDY. WOA
3079	1098472.168	939271.873	HWY. BDY. WOA
3080	1098470.062	939236.070	HWY. BDY. WOA
3081	1098543.838	939302.047	HWY. BDY. WOA
3082	1099318.663	939106.074	HWY. BDY. WOA
3083	1097809.223	939236.284	HWY. BDY. WOA
3084	1097953.845	939155.777	HWY. BDY. WOA
3085	1097933.843	939106.422	HWY. BDY. WOA
3086	1098164.986	939018.492	HWY. BDY. WOA
3087	1098175.613	938977.798	HWY. BDY. WOA
3088	1098273.250	938931.925	HWY. BDY. WOA
3089	1098322.043	938909.964	HWY. BDY. WOA
3090	1098450.173	938881.430	HWY. BDY. WOA
3091	1098618.521	938807.080	HWY. BDY. WOA
3092	1098732.664	938776.502	HWY. BDY. WOA
3093	1098955.375	938689.971	HWY. BDY. WOA
3094	1099008.277	938686.337	HWY. BDY. WOA
3095	1099173.896	938675.387	HWY. BDY. WOA
3096	1099286.649	938622.830	HWY. BDY. WOA
3097	1099364.273	938584.748	HWY. BDY. WOA
3098	1099357.540	938483.002	HWY. BDY. WOA
3099	1099477.201	938473.464	HWY. BDY. WOA
3100	1099502.789	938467.805	HWY. BDY. WOA
3101	1099508.599	938555.613	HWY. BDY. WOA
3102	1099543.796	938571.606	HWY. BDY. WOA
3103	1099583.846	938568.956	HWY. BDY. WOA
3104	1099757.046	938540.389	HWY. BDY. WOA
3105	1099961.773	938506.621	HWY. BDY. WOA
3106	1100011.104	938498.483	HWY. BDY. WOA
3107	1100150.094	938474.437	HWY. BDY. WOA
3108	1100150.325	938478.416	HWY. BDY. WOA
3109	1100256.581	938463.251	HWY. BDY. WOA
3110	1100308.767	938478.593	HWY. BDY. WOA
3111	1100437.841	938460.167	HWY. BDY. WOA
3112	1100438.354	938463.581	HWY. BDY. WOA
3113	1100569.167	938443.902	HWY. BDY. WOA
3114	1100621.251	938454.045	HWY. BDY. WOA
3115	1100820.272	938424.105	HWY. BDY. WOA
3116	1100777.988	938552.594	HWY. BDY. WOA
3117	1100612.739	938746.415	HWY. BDY. WOA
3118	1100172.428	938857.962	HWY. BDY. WOA
3119	1099927.116	938952.188	HWY. BDY. WOA
3120	1100172.390	938857.315	HWY. BDY. WOA
3121	1100679.251	938744.695	HWY. BDY. WOA
3122	1100818.365	938581.528	HWY. BDY. WOA
3123	1100878.834	938554.433	HWY. BDY. WOA
3124	1100934.774	938545.490	HWY. BDY. WOA
3125	1100800.702	938731.905	HWY. BDY. WOA
3126	1101009.901	938731.038	HWY. BDY. WOA
3127	1095134.348	940709.698	HWY. BDY. WOA
3128	1095478.909	940942.491	HWY. BDY. WOA
3129	1095306.048	941041.979	HWY. BDY. WOA

POINT	POINT NUI NORTHING	EASTING	DESCRIPTION
3130	1095237.759	941308.683	HWY. BDY. WOA
3131	1095467.047	941256.094	HWY. BDY. WOA
3132	1095604.932	941620.732	HWY. BDY. WOA
3133	1095683.116	941790.433	HWY. BDY. WOA
3134	1095805.493	942055.923	HWY. BDY. WOA
3135	1096751.638	940146.528	HWY. BDY. WOA
3136	1096677.484	940197.169	HWY. BDY. WOA
3137	1096578.857	940305.460	HWY. BDY. WOA
3138	1096554.778	940437.362	HWY. BDY. WOA
3139	1096610.715	940631.994	HWY. BDY. WOA
3140	1096782.125	940610.116	HWY. BDY. WOA
3141	1096910.376	940693.903	HWY. BDY. WOA
3142	1096849.374	940922.738	HWY. BDY. WOA
3143	1096882.561	941082.075	HWY. BDY. WOA
3144	1096484.805	942574.081	HWY. BDY. WOA
3145	1096412.012	942847.126	HWY. BDY. WOA
3146	1096358.179	943049.052	HWY. BDY. WOA
3147	1096100.582	944015.306	HWY. BDY. WOA
3148	1095707.264	942906.717	HWY. BDY. WOA
3149	1095518.601	943351.772	HWY. BDY. WOA
3150	1095199.893	943840.857	HWY. BDY. WOA
3151	1095119.876	944100.100	HWY. BDY. WOA
3152	1095551.205	944101.046	HWY. BDY. WOA
3153 3154	1095609.818	944136.132	HWY. BDY. WOA
	1095394.952	944279.520	HWY. BDY. WOA
3155 3156	1095317.192 1095305.001	944476.321 944385.784	HWY. BDY. WOA
3157	1093303.001	945023.852	HWY. BDY. WOA
3158	1095150.143	944752.668	HWY. BDY. WOA
3159	1095069.905	945001.296	HWY. BDY. WOA
3160	1094989.140	945039.100	HWY. BDY. WOA
3161	1094646.054	944965.403	HWY. BDY. WOA
3162	1094651.465	944520.511	HWY. BDY. WOA
3163	1095130.908	945013.012	HWY. BDY. WOA
3164	1095253.909	944757.015	HWY. BDY. WOA
3165	1095386.915	944842.010	HWY. BDY. WOA
3166	1095461.913	945042.009	HWY. BDY. WOA
3167	1095424.333	945319.745	HWY. BDY. WOA
3168	1095085.448	946843.845	HWY. BDY. WOA
3169	1095890.916	944801.163	HWY. BDY. WOA
3170	1095833.039	945029.967	HWY. BDY. WOA
3171	1095394.427	946999.195	HWY. BDY. WOA
3172	1095031.777	947306.758	HWY. BDY. WOA
3173	1095006.331	947531.409	HWY. BDY. WOA
3174	1094948.289	947860.421	HWY. BDY. WOA
3175	1094883.372	947848.524	HWY. BDY. WOA
3176	1094715.826	948453.571	HWY. BDY. WOA
3177	1094539.717	949149.945	HWY. BDY. WOA
3178	1094597.699	949183.007	HWY. BDY. WOA
3179	1094559.685	949260.572	HWY. BDY. WOA
3180	1095279.549	947505.965	HWY. BDY. WOA
3181	1095182.462	947942.161	HWY. BDY. WOA
3182 3183	1095068.040 1095052.773	948456.265 948524.880	HWY. BDY. WOA
	1095032.773		
3184 3185	1095013.359	948582.987 948701.852	HWY. BDY. WOA
3186	1095013.359	948701.852	HWY. BDY. WOA
3187	1094941.891	949023.011	HWY. BDY. WOA
3188	1094851.005	950869.679	HWY. BDY. WOA
3189	1094929.094	950966.445	HWY. BDY. WOA
3190	1095682.533	951960.090	HWY. BDY. WOA
3191	1093062.533	949684.877	HWY. BDY. WOA
3192	1094335.392	949974.049	HWY. BDY. WOA
3193	1094337.490	950039.238	HWY. BDY. WOA
3194	1094347.723	950170.856	HWY. BDY. WOA

POINT	NORTHING	BER COORDINATE TA EASTING	DESCRIPTION
3195	1094352.434	950231.606	HWY. BDY. WOA
3196	1094384.486	950644.755	HWY. BDY. WOA
3197	1094410.923	950985.550	HWY. BDY. WOA
3198	1094579.737	951223.335	HWY. BDY. WOA
3199	1094896.240	951717.679	HWY, BDY, WOA
3200	1094996.698	952016.098	HWY. BDY. WOA
3201	1095069.005	952007.786	HWY. BDY. WOA
3202	1105972.942	959187.017	HWY. BDY. WOA
3203	1105941.476	959239.226	HWY. BDY. WOA
3204	1105865.922	959332.164	HWY. BDY. WOA
3205	1105788.584	959338.791	HWY. BDY. WOA
3206	1105682.761	959383.752	HWY. BDY. WOA
3207	1105256.159	959492.330	HWY. BDY. WOA
3208	1105068.194	959513.297	HWY. BDY. WOA
3209	1104749.216	960538.583	HWY. BDY. WOA
3210	1104841.112	960593.184	HWY. BDY. WOA
3211	1105391.665	960956.015	HWY. BDY. WOA
3212	1105356.609	961039.992	HWY. BDY. WOA
3213	1105237.879	961292.736	HWY. BDY. WOA
3214	1105306.404	961466.564	HWY. BDY. WOA
3215	1105341.610	961405.855	HWY. BDY. WOA
3216	1105398.551	961331.020	HWY. BDY. WOA
3217	1105466.798	961276.547	HWY. BDY. WOA
3218	1106140.777	959450.784	HWY. BDY. WOA
3219	1106110.629	959496.076	HWY. BDY. WOA
3220	1106031.240	959509.395	HWY. BDY. WOA
3221	1106032.675	959692.746	HWY. BDY. WOA
3222	1106354.687	959896.721	HWY. BDY. WOA
3223	1106363.693	959901.507	HWY. BDY. WOA
3224	1106368.044	959907.157	HWY. BDY. WOA
3225	1106662.078	960091.982	HWY. BDY. WOA
3226	1106673.652	960098.230	HWY. BDY. WOA
3227	1106685.226	960104.478	HWY. BDY. WOA
3228	1106786.765	960167.501	HWY. BDY. WOA
3229	1105676.505	961195.206	HWY. BDY. WOA
3230	1106013.032	961340.800	HWY. BDY. WOA
3231	1106568.162	961324.786	HWY. BDY. WOA
3232	1106912.599	961410.035	HWY. BDY. WOA
3233 3234	1107053.731 1107221.514	961397.647	HWY. BDY. WOA
3235	1107232.117	961382.919 961382.163	HWY. BDY. WOA
3236	1107232.117	961447.625	HWY. BDY. WOA
3237	1107210.800	961461.811	HWY. BDY. WOA
3237	1107228.343	961599.154	HWY. BDY. WOA
3239	1107410.447	961615.601	HWY. BDY. WOA
3240	1107432.946	961543.914	HWY. BDY. WOA
3241	1107478.700	961750.633	HWY. BDY. WOA
3242	11077786.329	961757.547	HWY. BDY. WOA
3243	1107716.857	961830.383	HWY. BDY. WOA
3244	1107716.837	961964.601	HWY. BDY. WOA
3245	1107972.688	961919.848	HWY. BDY. WOA
3246	11079783.034	961932.691	HWY. BDY. WOA
3247	1108065.573	962001.439	HWY. BDY. WOA
3248	1108089.441	962022.183	HWY. BDY. WOA
3249	1108257.061	962168.695	HWY. BDY. WOA
3250	1108278.159	962188.287	HWY. BDY. WOA
3251	1108396.109	962284.930	HWY. BDY. WOA
3252	1108421.668	962304.210	HWY. BDY. WOA
3253	1108596.889	962437.637	HWY. BDY. WOA
3254	1108800.482	962560.110	HWY. BDY. WOA
3255	1109041.078	962676.812	HWY. BDY. WOA
3256	1107037.718	960897.337	HWY. BDY. WOA
3257	1107454.237	961161.485	HWY. BDY. WOA
3258	1107462.815	961166.721	HWY. BDY. WOA
3259	1107475.856	961175.613	HWY. BDY. WOA

R.	505-3-2.100	(F.I.C. 64-7)	SYRACUSE - FAYETTEVILLE	S.H.	5587	PIN:	3501.91	BRIDGES	CULVERTS	Г
R.	505-3-2.101	(F.I.C. 64-7)	HIGH BRIDGE ROAD	S.H.	9354		3301.31	DIVIDUES	COLVENIS	ᆫ
R.	571-1-1	(S.H. 76-2)								1-
R.	571-1-2	(F.I.S.H. 61-17)				TOWN:				١.
R.	571-1-3	(F.I.S.H. 68-4)				VILLAGE:				ı
R.	570-1-5.12	(F.I.S.H. 68-4)				COUNTY:	ONONDAGA			1 '
						COUNTY	UNUNDAGA			1

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED I-81 VIADUCT PROJECT - PHASE 1, CONTRACT 2 HIGHWAY BOUNDARY PLAN

CONTRACT NUMBER D900056

DRAWING NO.: 350191\_C2-HBP SHEET NO.: 22 OF 28



+	RAFTING MDS CHECK WRS PROJECT MANAGER TTO
	CHECK JFP DF
	DESIGN N/A
	N/A
	N/A JOB MANAGER
	ERVISOR N

	POINT NUIV	iber coordinate ta	
POINT	NORTHING	EASTING	DESCRIPTION
3260	1107659.548	961296.036	HWY. BDY. WOA
3261	1107688.805	961313.862	HWY. BDY. WOA
3262	1108551.221	961817.686	HWY. BDY. WOA
3263	1109082.654	962076.344	HWY. BDY. WOA
3264	1109375.998	961938.086	HWY. BDY. WOA
3265	1109404.917	961951.288	HWY. BDY. WOA
3266	1109410.443	962045.939	HWY. BDY. WOA
3267	1109536.447	962118.195	HWY. BDY. WOA
3268	1109388.208	962154.652	HWY. BDY. WOA
3269	1109528.775	962263.470	HWY. BDY. WOA
3270	1109732.452	962319.847	HWY. BDY. WOA
3271	1110377.160	962346.841	HWY. BDY. WOA
3272	1110710.854	962239.963	HWY. BDY. WOA
3273	1110812.404	962272.681	HWY. BDY. WOA
3274	1111019.275	962223.117	HWY. BDY. WOA
3275	1111456.529	962038.034	HWY. BDY. WOA
3276	1109651.688	962573.483	HWY. BDY. WOA
3277	1109816.721	962521.853	HWY. BDY. WOA
3278	1110331.512	962596.632	HWY. BDY. WOA
3279	1111702.132	962837.223	HWY. BDY. WOA
3280	1111962.262	963021.113	HWY. BDY. WOA
3281	1112025.236	963137.901	HWY. BDY. WOA
3282	1112092.738	963655.820	HWY. BDY. WOA
3283	1111893.777	961828.363	HWY. BDY. WOA
3284	1112305.601	961572.335	HWY. BDY. WOA
3285	1112687.103	961272.984	HWY. BDY. WOA
3286	1112787.880	961174.403	HWY. BDY. WOA
3287	1112777.526	961059.354	HWY. BDY. WOA
3288	1112914.715	961050.331	HWY. BDY. WOA
3289	1113033.745	960933.893	HWY. BDY. WOA
3290	1113083.354	960873.458	HWY. BDY. WOA
3291	1112730.874	963638.250	HWY. BDY. WOA
3292	1112750.347	963580.687	HWY. BDY. WOA
3293	1112863.268	963307.920	HWY. BDY. WOA
3294	1113256.895	962836.840	HWY. BDY. WOA
3295	1113275.681	962833.411	HWY. BDY. WOA
3296	1100956.011	938541.399	HWY. BDY. WOA
3297	1094019.753	939880.738	HWY. BDY. W/ACCESS
3298	1093984.680	939915.921	HWY. BDY. W/ACCESS
3299	1094451.981	940628.231	HWY. BDY. W/ACCESS
3300	1094457.836	940748.974	HWY. BDY. W/ACCESS
3302	1094400.371	940611.907	HWY. BDY. W/ACCESS
3303	1094406.969	940752.584	HWY. BDY. W/ACCESS
3304	1095013.833	941210.159	HWY. BDY. W/ACCESS
3305	1094956.402	941243.207	HWY. BDY. W/ACCESS
3306	1094550.026	941413.475	HWY. BDY. W/ACCESS
3307	1094555.635	941437.776	HWY. BDY. W/ACCESS
3308	1094449.482	941481.685	HWY. BDY. W/ACCESS
3309	1095020.730	941346.463	HWY. BDY. W/ACCESS
3310	1094602.609	941499.838	HWY. BDY. W/ACCESS
3311	1094470.918	941554.279	HWY. BDY. W/ACCESS
3312	1096836.534	940523.133	HWY. BDY. W/ACCESS
3313	1096865.626	940521.115	HWY. BDY. W/ACCESS
3314	1096906.662	940597.034	HWY. BDY. W/ACCESS
3315	1096991.238	940604.593	HWY. BDY. W/ACCESS
3316	1095013.606	945452.323	HWY. BDY. W/ACCESS
3317	1094936.344	945027.759	HWY. BDY. W/ACCESS
3318	1094960.579	946098.712	HWY. BDY. W/ACCESS
3319	1095045.893	946923.859	HWY. BDY. W/ACCESS
3320	1094925.449	946148.838	HWY. BDY. W/ACCESS
3321	1094905.318	946376.154	HWY. BDY. W/ACCESS
3322	1094864.261	946689.930	HWY. BDY. W/ACCESS
3323	1094934.331	947174.526	HWY. BDY. W/ACCESS
3324	1095026.758	947284.640	HWY. BDY. W/ACCESS
3325	1094912.199	947441.185	HWY. BDY. W/ACCESS

POINT	NORTHING	BER COORDINATE T EASTING	DESCRIPTION
3326	1094677.189	948302.050	HWY. BDY. W/ACCES
3327	1094657.395	948297.465	HWY. BDY. W/ACCES
3328	1094621.030	948442.572	HWY. BDY. W/ACCES
3329	1094422.365	948419.532	HWY, BDY, W/ACCES
3330	1094364.051	948998.584	HWY. BDY. W/ACCES
3331	1094429.945	949156.953	HWY. BDY. W/ACCES
3332	1094389.944	949519.802	HWY. BDY. W/ACCES
3333	1094335.846		
		949661.312	HWY. BDY. W/ACCES
3334	1094269.335	949973.246	HWY. BDY. W/ACCES
3335	1094281.101	950165.379	HWY. BDY. W/ACCES
3336	1094292.102	950307.188	HWY. BDY. W/ACCES
3337	1094286.649	950408.009	HWY. BDY. W/ACCES
3338	1094279.744	950535.831	HWY. BDY. W/ACCES
3339	1094284.012	950590.776	HWY. BDY. W/ACCES
3340	1094289.806	950665.441	HWY. BDY. W/ACCES
3341	1094323.581	950712.969	HWY. BDY. W/ACCES
3342	1094345.124	950990.655	HWY. BDY. W/ACCES
3343	1106190.584	958386.174	HWY. BDY. W/ACCES
3344	1106098.908	958743.886	HWY. BDY. W/ACCES
3345	1106088.294	958781.602	HWY. BDY. W/ACCES
3346	1106022.960	958764.170	HWY. BDY. W/ACCES
3347	1106007.536	958822.154	HWY. BDY. W/ACCES
3348	1106072.039	958839.364	HWY. BDY. W/ACCES
3349	1106032.963	958978.222	HWY. BDY. W/ACCES
3350	1105974.111	959187.354	HWY. BDY. W/ACCES
3351	1105887.476	959162.379	HWY. BDY. W/ACCES
3352	1105871.707	959219.077	HWY. BDY. W/ACCES
3353	1106285.224	958415.581	HWY. BDY. W/ACCES
3354	1106280.481	958434.175	HWY. BDY. W/ACCES
3355	1106264.417	958497.159	HWY. BDY. W/ACCES
3356	1106258.540	958520.201	HWY. BDY. W/ACCES
3357	1106274.820	958550.084	HWY. BDY. W/ACCES
3358	1106366.649	958580.864	HWY. BDY. W/ACCES
3359	1106407.744	958594.638	HWY. BDY. W/ACCES
3360	1106337.271	958821.434	HWY. BDY. W/ACCES
3361	1106199.294	958853.713	HWY. BDY. W/ACCES
3362	1106177.691	958884.889	HWY. BDY. W/ACCES
3363	1106145.971	958988.372	HWY. BDY. W/ACCES
3364	1106139.195	958986.592	HWY. BDY. W/ACCES
3365	1106094.849	959131.268	HWY. BDY. W/ACCES
3366	1106101.528	959133.364	HWY. BDY. W/ACCES
3367	1106071.497	959231.336	HWY. BDY. W/ACCES
3368	1106073.542	959234.684	HWY. BDY. W/ACCES
3369	1106086.306	959243.874	HWY. BDY. W/ACCES
3370	1106195.374	959278.090	HWY. BDY. W/ACCES
3371	1106104.830	959504.758	HWY. BDY. W/ACCES
3372	1106120.966	959517.553	HWY. BDY. W/ACCES
3373	1106105.262	959568.090	HWY. BDY. W/ACCES
3374	1108875.143	961458.880	HWY. BDY. W/ACCES
3375	1108842.673	961502.132	HWY. BDY. W/ACCES
3376	1108883.489	961579.109	HWY. BDY. W/ACCES
3377	1108924.306	961656.086	HWY. BDY. W/ACCES
3378	1108974.382	961739.952	HWY. BDY. W/ACCES
3379	1109024.459	961823.819	HWY. BDY. W/ACCES
3380	1109041.608	961851.001	HWY. BDY. W/ACCES
3381	1109058.757	961878.184	HWY. BDY. W/ACCES
3382	1109095.250	961932.122	HWY. BDY. W/ACCES
3383	1109133.043	961986.130	HWY. BDY. W/ACCES
3384	1109170.795	962036.764	HWY. BDY. W/ACCES
3385	1109210.639	962086.859	HWY. BDY. W/ACCES
3386	1109241.512	962123.667	HWY. BDY. W/ACCES
3387	1109107.601	962087.429	HWY. BDY. W/ACCES
3388	1109035.404	961569.258	HWY. BDY. W/ACCES
3389	1109140.625	961747.062	HWY. BDY. W/ACCES
3390	1109330.788	961738.094	HWY. BDY. W/ACCES

POINT	NORTHING	BER COORDINATE T EASTING	DESCRIPTION
3391	1109326.840	961670.159	HWY. BDY. W/ACCES
3392	1109370.071	961856.834	HWY. BDY. W/ACCES
3393	1108987.878	962791.876	HWY. BDY. W/ACCES
3394	1108888.773	963003.022	HWY. BDY. W/ACCES
3395	1108858.997	963078.830	HWY. BDY. W/ACCES
3396	1108816.888	963184.997	HWY. BDY. W/ACCES
3397	1109323.847	962755.458	HWY. BDY. W/ACCES
3398	1109242.989	962701.930	HWY. BDY. W/ACCES
3399	1109201.361	962756.122	HWY. BDY. W/ACCES
3400	1108907.701	963239.538	HWY. BDY. W/ACCES
3401	1109662.451	962190.451	HWY. BDY. W/ACCES
3402	1109804.997	962202.813	HWY. BDY. W/ACCES
3403	1109982.260	962238.118	HWY. BDY. W/ACCES
3404	1109991.169	962238.159	HWY. BDY. W/ACCES
3405	1110567.956	962233.836	HWY. BDY. W/ACCES
3406	1109651.006	962588.334	HWY. BDY. W/ACCES
3407	1109843.257	962642.120	HWY. BDY. W/ACCES
3408	1110125.846	962671.641	HWY. BDY. W/ACCES
3409	1110175.256	962677.118	HWY. BDY. W/ACCES
3410	1110743.039	962786.416	HWY. BDY. W/ACCES
3411	1111288.300	962891.383	HWY. BDY. W/ACCES
3412	1111745.092	963209.976	HWY. BDY. W/ACCES
3413	1111806.092	963422.700	HWY. BDY. W/ACCES
3414	1112070.315	963487.377	HWY. BDY. W/ACCES
3415	1113132.174	963552.988	HWY. BDY. W/ACCES
3416	1113295.851	963565.963	HWY. BDY. W/ACCES
3417	1112989.218	963364.837	HWY. BDY. W/ACCES
3418	1113084.935	963372.466	HWY. BDY. W/ACCES
3419	1113263.509	963385.294	HWY. BDY. W/ACCES
3420	1113291.079	963392.652	HWY. BDY. W/ACCES
3421	1104449.325	963110.428	HWY. BDY. W/ACCES
3422	1104425.310	963155.472	HWY. BDY. W/ACCES
3423	1104499.189	963197.015	HWY. BDY. W/ACCES
3424	1104472.805	963251.015	HWY. BDY. W/ACCES
3425	1104397.076	963208.431	HWY. BDY. W/ACCES
3426	1104164.748	963644.202	HWY. BDY. W/ACCES
3427	1104209.622	963666.708	HWY. BDY. W/ACCES
3428	1104232.799	963677.200	HWY. BDY. W/ACCES
3429	1104208.799	963732.214	HWY. BDY. W/ACCES
3430	1104137.040	963696.350	HWY. BDY. W/ACCES
3431	1103896.185	964147.941	HWY. BDY. W/ACCES
3432	1103980.783	964146.322	HWY. BDY. W/ACCES
3433	1103976.717	964192.531	HWY. BDY. W/ACCES
3434	1103889.497	964195.401	HWY. BDY. W/ACCES
3435	1103879.806	964223.516	HWY. BDY. W/ACCES
3436	1103868.466	964267.995	HWY. BDY. W/ACCES
3437	1103859.091	964312.920	HWY. BDY. W/ACCES
3438	1103853.575	964357.936	HWY. BDY. W/ACCES
3439	1103851.703	964403.627	HWY. BDY. W/ACCES
3440	1103852.067	964450.209	HWY. BDY. W/ACCES
3441	1103855.756	964498.190	HWY. BDY. W/ACCES
3442	1103859.208	964548.707	HWY. BDY. W/ACCES
3443	1103862.005	964597.443	HWY. BDY. W/ACCES
3444	1103867.413	964649.256	HWY. BDY. W/ACCES
3445	1103867.378	964657.451	HWY. BDY. W/ACCES
3446	1103914.771	964654.467	HWY. BDY. W/ACCES
3447	1104332.936	963048.376	HWY. BDY. W/ACCES
3448	1103984.252	963702.403	HWY. BDY. W/ACCES
3449	1103712.009	964121.277	HWY. BDY. W/ACCES
3450	1103727.396	964122.740	HWY. BDY. W/ACCES
3451	1103685.165	964191.851	HWY. BDY. W/ACCES
3452	1103606.697	964387.144	HWY. BDY. W/ACCES
3453	1103721.823	964349.183	HWY. BDY. W/ACCES
3454	1103697.253	964381.343	HWY. BDY. W/ACCES
		0 0 . 0	

I.R. 505-3-2.100		SYRACUSE - FAYETTEVILLE	S.H. 5587		3501.91	BRIDGES	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED	CONTRACT NUMBER
I.R. 505-3-2.101	(F.I.C. 64-7)	HIGH BRIDGE ROAD	S.H. 9354	]	3301.31	J		ACE DIMENSIONS IN 11 DIVERS OTHERWISE NOTED	1
I.R. 571-1-1	(S.H. 76-2)			1				II-81 VIADUCT PROJECT - PHASE 1. CONTRACT 2	D900056
I.R. 571-1-2	(F.I.S.H. 61-17)			TOWN:				1	
I.R. 571-1-3	(F.I.S.H. 68-4)			VILLAGE:				HIGHWAY BOUNDARY PLAN	DRAWING NO.: 350191_C2-HBP
I.R. 570-1-5.12	(F.I.S.H. 68-4)				ONONDAGA			HIGHWAL DOUNDANT I LAN	CUEET NO. 23 OF 20
				COUNTY:	UNUNDAGA		1		SHEET NO.: 23 OF 28

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



+	CT MANAGER TTO	
	WRS PROJEC	
	MDS CHECK	
	DRAFTING	
	CHECK JFP	
	N/A	
	N/A DESIGN	
	JOB MANAGER	
	N/A	
	VISOR _	

	POINT NUMBER COORDINATE TABLE							
POINT	NORTHING	EASTING	DESCRIPTION					
3456	1103720.106	964455.789	HWY. BDY. W/ACCESS					
3457	1103724.101	964507.749	HWY. BDY. W/ACCESS					
3458	1103618.517	964535.862	HWY. BDY. W/ACCESS					
3459	1103557.357	964644.878	HWY. BDY. W/ACCESS					
3460	1103496.197	964753.894	HWY. BDY. W/ACCESS					
3461	1103457.544	964822.792	HWY. BDY. W/ACCESS					
3462	1103419.869	964889.946	HWY. BDY. W/ACCESS					
3463	1103046.527	965543.794	HWY. BDY. W/ACCESS					
3464	1103402.666	964706.008	HWY. BDY. W/ACCESS					
3465	1103414.813	964704.796	HWY. BDY. W/ACCESS					
3466	1103308.639	964894.048	HWY. BDY. W/ACCESS					
3467	1102971.821	965497.223	HWY. BDY. W/ACCESS					
3468	1103727.466	964556.988	HWY. BDY. W/ACCESS					
3469	1103730.398	964608.082	HWY. BDY. W/ACCESS					
3470	1103735.383	964655.842	HWY. BDY. W/ACCESS					
3471	1103735.168	964705.580	HWY. BDY. W/ACCESS					
3472	1103739.845	964755.453	HWY. BDY. W/ACCESS					
3473	1103739.716	964803.717	HWY. BDY. W/ACCESS					
3474	1103741.754	964856.807	HWY. BDY. W/ACCESS					
3475	1103746.395	964907.484	HWY. BDY. W/ACCESS					
3476	1103749.629	964957.150	HWY. BDY. W/ACCESS					
3477	1103753.752	965006.296	HWY. BDY. W/ACCESS					
3478	1103758.690	965105.872	HWY. BDY. W/ACCESS					
3479	1103755.917	965055.297	HWY. BDY. W/ACCESS					
3481	1103762.016	965157.591	HWY. BDY. W/ACCESS					
3482	1103767.506	965207.148	HWY. BDY. W/ACCESS					
3483	1103770.248	965254.983	HWY. BDY. W/ACCESS					
3484	1103772.593	965304.637	HWY. BDY. W/ACCESS					
3485	1103775.031	965354.590	HWY. BDY. W/ACCESS					
3486	1103777.382	965404.510	HWY. BDY. W/ACCESS					
3487	1103779.812	965454.760	HWY. BDY. W/ACCESS					
3488	1103946.572	964712.584	HWY. BDY. W/ACCESS					
3489	1103868.863	964717.476	HWY. BDY. W/ACCESS					
3490	1103871.862	964749.454	HWY. BDY. W/ACCESS					
3491	1103871.722	964801.361	HWY. BDY. W/ACCESS					
3492	1103873.523	964848.251	HWY. BDY. W/ACCESS					
3493 3494	1103878.003 1103881.270	964897.174	HWY. BDY. W/ACCESS HWY. BDY. W/ACCESS					
3495	1103885.508	964947.343 964997.862	HWY. BDY. W/ACCESS					
3496	1103887.758	965048.770	HWY. BDY. W/ACCESS					
3497	1103890.458	965098.023	HWY. BDY. W/ACCESS					
3498	1103893.549	965146.082	HWY. BDY. W/ACCESS					
3499	1103897.761	965184.107	HWY. BDY. W/ACCESS					
3500	1103960.071	965180.287	HWY. BDY. W/ACCESS					
3501	1105135.776	961239.512	HWY. BDY. W/ACCESS					
3502	1105133.770	961276.665	HWY. BDY. W/ACCESS					
3503	1105116.000	961294.490	HWY. BDY. W/ACCESS					
3504	1105149.207	961348.634	HWY. BDY. W/ACCESS					
3505	1105135.412	961374.900	HWY. BDY. W/ACCESS					
3506	1092392.036	939973.298	2022 FEE WOA					
3507	1092459.888	939945.590	2022 FEE WOA					
3508	1092565.822	939918.926	2022 FEE WOA					
3509	1092603.252	939927.929	2022 FEE WOA					
3510	1094304.539	939990.838	2022 FEE WOA					
3511	1094430.502	939951.308	2022 FEE WOA					
3512	1094655.204	940013.909	2022 FEE WOA					
3513	1094890.142	939995.762	2022 FEE WOA					
3514	1094931.458	940007.981	2022 FEE WOA					
3515	1095460.505	940084.543	2022 FEE WOA					
3516	1095858.508	940089.393	2022 FEE WOA					
3517	1096074.222	940064.051	2022 FEE WOA					
3518	1096700.888	940181.186	2022 FEE WOA					
	1096664.889	940565.911	2022 FEE WOA					
3519	1090004.009							
	1096686.091	940622.373	2022 FEE WOA					

DOINT		BER COORDINATE T	
POINT	NORTHING	EASTING	DESCRIPTION
3522	1096681.657	940739.495	2022 FEE WOA
3523	1096303.813	940902.744	2022 FEE WOA
3524	1095395.511	941044.918	2022 FEE WOA
3525	1095327.200	941081.370	2022 FEE WOA
3526	1095186.417	941212.600	2022 FEE WOA
3527	1095415.178	941090.530	2022 FEE WOA
3528	1096330.682	940946.945	2022 FEE WOA
3529	1105962.975	959184.144	2022 FEE WOA
3530	1106008.966	959063.494	2022 FEE WOA
3531	1106174.963	959782.877	2022 FEE WOA
3532	1106305.205	959844.029	2022 FEE WOA
3533	1106618.151	960030.002	2022 FEE WOA
3534	1106723.369	960128.152	2022 FEE WOA
3535	1096840.732	940586.964	2022 FEE
3536	1096846.052	940667.859	2022 FEE
3537	1096462.274	939963.371	2022 TEMP. EASEMEN
3538	1096442.171	939906.750	2022 TEMP. EASEMEN
3539	1096533.476	939763.150	2022 TEMP. EASEMEN
3540	1096520.666	939688.102	2022 TEMP. EASEMEN
3541	1096546.187	939638.881	2022 TEMP. EASEMEN
3542	1096622.732	939697.242	2022 TEMP. EASEMEN
3543	1096671.631	939679.301	2022 TEMP. EASEMEN
3544	1096671.631	939603.166	2022 TEMP. EASEMEN
			2022 TEMP. EASEMEN
3545 3546	1096746.085	939619.756	
	1096813.466	939800.231	2022 TEMP. EASEMEN
3547	1103721.195	964364.525	2022 TEMP. EASEMEN
3548	1103658.608	964457.184	2022 TEMP. EASEMEN
3549	1097750.684	939258.817	CITY ST. BDY.
3550	1097716.786	939244.071	CITY ST. BDY.
3551	1097499.044	939331.626	CITY ST. BDY.
3552	1097494.768	939271.782	CITY ST. BDY.
3553	1097741.328	939127.860	CITY ST. BDY.
3554	1097717.885	938799.711	CITY ST. BDY.
3555	1097777.729	938795.436	CITY ST. BDY.
3556	1098018.559	938859.102	CITY ST. BDY.
3557	1098081.122	939074.328	CITY ST. BDY.
3558	1098068.448	938855.899	CITY ST. BDY.
3559	1098238.625	938343.965	CITY ST. BDY.
3560	1098289.051	938349.727	CITY ST. BDY.
3561	1098569.841	938828.579	CITY ST. BDY.
3562	1098543.022	938423.404	CITY ST. BDY.
3563	1098594.317	938441.408	CITY ST. BDY.
3564	1099707.490	938548.562	CITY ST. BDY.
3565	1099698.705	938415.932	CITY ST. BDY.
3566	1099747.845	938401.484	CITY ST. BDY.
3567	1099938.364	938345.571	CITY ST. BDY.
3568	1099986.642	938330.192	CITY ST. BDY.
0510	440000= 44=		
3569 3570	1100225.147 1100273.134	938242.842	CITY ST. BDY.
		938228.742	
3571	1100571.511		CITY ST. BDY.
3572	1100523.505	938140.177	CITY ST. BDY.
3573	1100866.871	938268.845	CITY ST. BDY.
3574	1100915.573	938278.747	CITY ST. BDY.
3575	1100862.480	938456.589	CITY ST. BDY.
3576	1100952.971	938483.595	CITY ST. BDY.
3577	1101197.365	938397.144	CITY ST. BDY.
3578	1101525.690	938351.008	CITY ST. BDY.
3579	1101538.092	938513.538	CITY ST. BDY.
3580	1101597.944	938509.296	CITY ST. BDY.
3598	1094899.599	951209.272	EXISTING EASEMEN
3599	1094872.018	951210.250	EXISTING EASEMEN
3600	1094939.923	951543.802	EXISTING EASEMEN
3601	1095051.444	951693.539	EXISTING EASEMEN
3602	1095099.601	951856.589	EXISTING EASEMEN

POINT NUMBER COORDINATE TABLE								
POINT	NORTHING	EASTING	DESCRIPTION					
3604	1100712.197	938707.053	EXISTING EASEMENT					
3605	1100765.468	938704.370	EXISTING EASEMENT					
3606	1100766.604	938711.277	EXISTING EASEMENT					
3607	1100724.162	938724.340	EXISTING EASEMENT					
3608	1100690.383	938743.622	EXISTING EASEMENT					
3609	1107489.875	961537.037	EXISTING EASEMENT					
3610	1107422.581	961607.757	EXISTING EASEMENT					
3611	1107960.933	962050.014	EXISTING EASEMENT					
3612	1107985.725	962071.141	EXISTING EASEMENT					
3613	1108091.229	962182.104	EXISTING EASEMENT					
3614	1108196.733	962293.068	EXISTING EASEMENT					
3615	1108359.551	962409.431	EXISTING EASEMENT					
3616	1108487.673	962500.998	EXISTING EASEMENT					
3617	1108647.643	962602.198	EXISTING EASEMENT					
3618	1108772.918	962678.601	EXISTING EASEMENT					
3619	1108911.228	962752.298	EXISTING EASEMENT					
3620	1109403.272	961923.115	EXISTING EASEMENT					

	POINT NUM	BER COORDINATE TA	BLE
POINT	NORTHING	EASTING	DESCRIPTION
3581	1100898.971	938680.383	RADIUS POINT
3582	1098858.410	941226.972	RADIUS POINT
3583	1098859.461	941227.397	RADIUS POINT
3584	1095018.474	936471.233	RADIUS POINT
3585	1095497.000	937522.517	RADIUS POINT
3586	1096567.128	945395.564	RADIUS POINT
3587	1096617.187	945423.463	RADIUS POINT
3588	1095729.864	946643.619	RADIUS POINT
3589	1097231.597	946594.971	RADIUS POINT
3590	1092655.456	946977.973	RADIUS POINT
3591	1091400.473	947009.202	RADIUS POINT
3592	1095300.493	950030.054	RADIUS POINT
3594	1100577.318	950223.555	RADIUS POINT
3595	1100587.360	950222.118	RADIUS POINT
3596	1100556.077	950172.592	RADIUS POINT
3597	1100582.514	950221.397	RADIUS POINT
3621	1098812.000	943190.378	RADIUS POINT
3622	1098768.070	943181.345	RADIUS POINT
3623	1098318.673	942360.775	RADIUS POINT

I.R. 505-3-2.100	(F.I.C. 64-7)	SYRACUSE - FAYETTEVILLE	S.H.	5587	PIN:	3501.91	BRIDGES	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED
I.R. 505-3-2.101	(F.I.C. 64-7)	HIGH BRIDGE ROAD	S.H.	9354	]	3301.31	55525	*************************************	ALE DIMENSIONS IN 11 DIVELSS OTHERWISE NOTED
I.R. 571-1-1	(S.H. 76-2)				1				I-81 VIADUCT PROJECT - PHASE 1. CONTRACT :
I.R. 571-1-2	(F.I.S.H. 61-17)				TOWN:				TOT VIADOCT TROOPER THAT IS CONTINUED IN
I.R. 571-1-3	(F.I.S.H. 68-4)				VILLAGE:				HIGHWAY BOUNDARY PLAN
I.R. 570-1-5.12	(F.I.S.H. 68-4)				COUNTY:	ONONDAGA			HIGHWAT DOUNDART I LAN
					LUUNIT	UNUNDAGA			

T1. CONTRACT 2 D900056

RY PLAN DRAWING NO.: 350191\_C2-HBP SHEET NO.: 24 OF 28

CONTRACT NUMBER

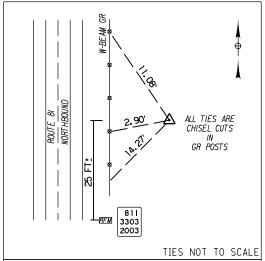
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



I-81 - B STA. 25+70.57 DESCRIPTION: G590 IS LOCATED ON THE WEST SIDE

OF ROUTE 81 NORTHBOUND, JUST NORTH OF RM 811/3303/1151

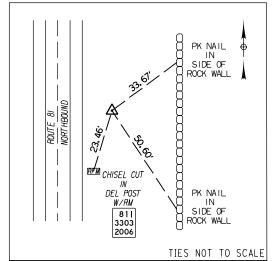
NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1089243, 2463 940544.4410



I-81 - B STA. 41+85.06

DESCRIPTION: B POINT 5 IS LOCATED ON THE EAST SIDE OF ROUTE 81 NORTHBOUND. 25 FT: NORTH OF RM 811/3303/2003

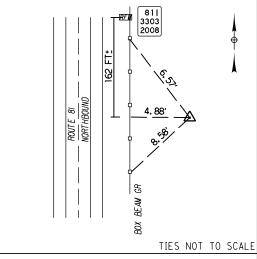
NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1090851, 1625 940398.9076



I-81 - B STA. 56+44.32

DESCRIPTION: B POINT 10 IS LOCATED ON THE EAST SIDE OF ROUTE 81 NORTHBOUND, 20 FT! NORTHBAST OF RM 811/3303/2006

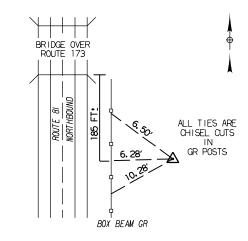
NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1092305, 8662 940283, 6592



I-81 - B STA. 65+10.87

DESCRIPTION: B POINT 15 IS LOCATED ON THE EAST SIDE OF ROUTE 81 NORTHBOUND, 162 FT SOUTH OF RM 811/3303/2008

> NYSPCS CENTRAL ZONE NAD 83/CORS 2011 N: 1093171.5831 940245.7134

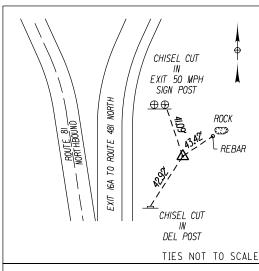


TIES NOT TO SCALE

I-81 - B STA. 74+44.04

DESCRIPTION: B POINT 20 IS LOCATED ON THE EAST SIDE OF ROUTE 81 NORTHBOUND, 185 FT' SOUTH OF THE SOUTHEAST WING WALL FOR THE BRIDGE OVER ROUTE 173

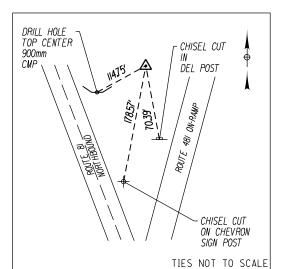
NYSPCS CENTRAL ZONE NAD 83/COR\$ 2011 1094093.7899 940388.3092



I-81 - B STA. 82+44.38

DESCRIPTION: B POINT 25 IS LOCATED ON THE EAST SIDE OF EXIT 16A, ROUTE 81 NORTH TO ROUTE 481 NORTH, 100 FT: NORTH OF RM 811/3303/2011

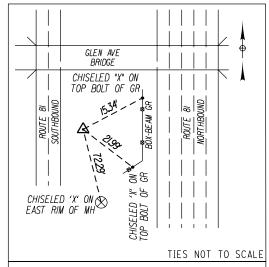
> NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1094874.0438 940566.5034



I-81 - B STA. 89+84.22 = I-481 - B STA. 2000+00.00

DESCRIPTION: G591 IS LOCATED EAST OF ROUTE 81 NORTHBOUND, ON TOP OF A HILL, NORTH OF THE ROUTE 481 NORTHBOUND ON-RAMP FROM

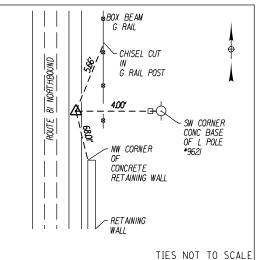
ROUTE 81 NORTH NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1095602, 1422 940697.8014



I-81 - B STA. 102+44.24

DESCRIPTION: G592 IS LOCATED IN THE MEDIAN OF ROUTE 81 NORTHBOUND AND SOUTHBOUND, SOUTH OF THE GLEN AVE BRIDGE OVERPASS

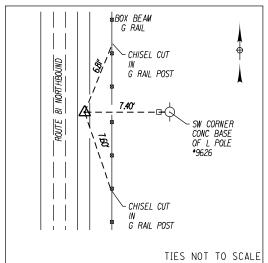
NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1096646, 6976 939993. 1416



I-81 - B STA. 110+12.43

DESCRIPTION: B POINT 26 IS 300 FT± SOUTH OF RM 81/3303/2017

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 N: 1097351.4514 939687, 4521



I-81 - B STA. 117+61.77

DESCRIPTION: B POINT 27 IS 85 FT± SOUTH OF RM 81/3303/2018

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1098020. 5124 939350. 0273 N:

I.R. 50	05-3-2.100	(F.I.C. 64-7)	SYRACUSE - FAYETTEVILLE	S.H.	5587	PIN:
I.R. 50	05-3-2.101	(F.I.C. 64-7)	HIGH BRIDGE ROAD	S.H.	9354	
I.R. 5	71-1-1	(S.H. 76-2)				
I.R. 5	71-1-2	(F.I.S.H. 61-17)				TOWN:
I.R. 5	71-1-3	(F.I.S.H. 68-4)				VILLAGE:
I.R. 5	70-1-5.12	(F.I.S.H. 68-4)				
						COUNTY:

3501.91 BRIDGES

ONONDAGA

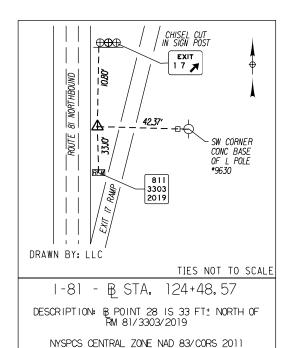
CULVERTS ALL DIMENSIONS IN ft LINLESS OTHERWISE NOTED I-81 VIADUCT PROJECT - PHASE 1, CONTRACT 2 HIGHWAY BOUNDARY PLAN

CONTRACT NUMBER D900056

DRAWING NO.: 350191\_C2-HBP SHEET NO.: 25 OF 28

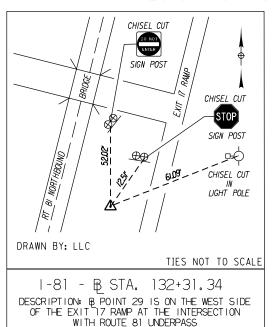
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1098658.0169

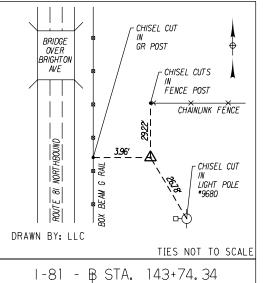
939094.5030



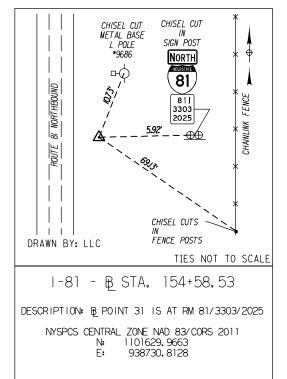
NYSPCS CENTRAL ZONE NAD 83/CORS 2011

1099423.3541

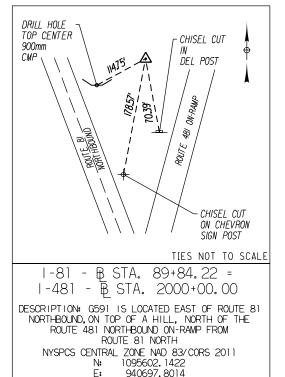
938930, 2532

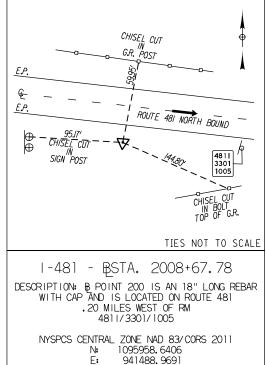


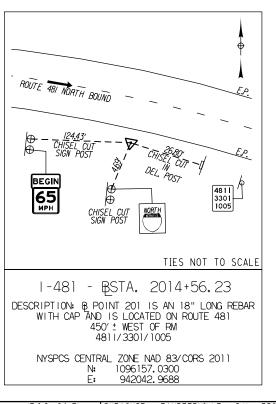
DESCRIPTION: B POINT 30 IS JUST SOUTH OF BRIDGÉ OVER BRIGHTON AVE NYSPCS CENTRAL ZONE NAD 83/CORS 2011 N٤ 1100545, 8943 938714.9566

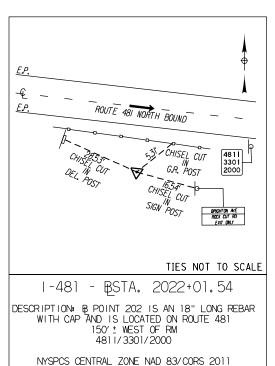


#### 2014 I-481 SURVEY BASELINE





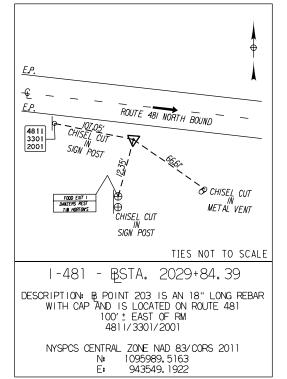




1096172.8630

ONONDAGA

942788. 1105



I.R. 505-3-2.100	(F.I.C. 64-7)	SYRACUSE - FAYETTEVILLE	S.H.	5587	PIN:
I.R. 505-3-2.101	(F.I.C. 64-7)	HIGH BRIDGE ROAD	S.H.	9354	
I.R. 571-1-1	(S.H. 76-2)				
I.R. 571-1-2	(F.I.S.H. 61-17)				TOWN:
I.R. 571-1-3	(F.I.S.H. 68-4)				VILLAGE:
I.R. 570-1-5.12	(F.I.S.H. 68-4)				
					COUNTY:

3501.91 BRIDGES CULVERTS ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED I-81 VIADUCT PROJECT - PHASE 1. CONTRACT : HIGHWAY BOUNDARY PLAN

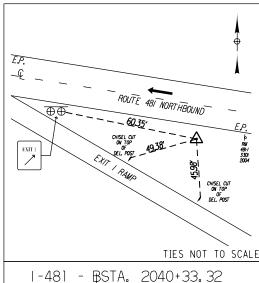
D900056 DRAWING NO.: 350191\_C2-HBP

CONTRACT NUMBER

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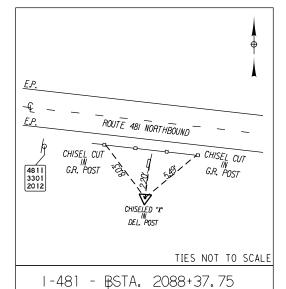
### 2014 I-481 SURVEY BASELINE



ROUTE 481 NORTH BOUND ON RAMP CHISEL CUT IN DEL POST TIES NOT TO SCALE

-Ç E.P.

ROUTE 481 NORTH BOUND TIES NOT TO SCALE I-481- BSTA. 2060+32.66



ROUTE 481 NORTHBOUND CHISEL CUT DEL. POST 9.45-CHISEL CUT G.R. POST 4811 3301 2015 EXIT 2 TIES NOT TO SCALE I-481 - BSTA. 2099+15.85 DESCRIPTION: B POINT 208 IS A 24" LONG REBAR WITH CAP AND IS LOCATED ON THE SOUTH SIDE OF ROUTE 481 NORTHBOUND 2501 WEST

DESCRIPTION: B POINT 204 IS A 18" LONG REBAR WITH CAP AND IS LOCATED ON TOURE 481, 450' ± WEST OF RM 481-1/3301/2004.

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1095740, 7199 N۵ 944568, 1818

I-481 - BSTA. 2049+81.44

DESCRIPTION: BASELINE POINT 205 IS AN 18" LONG REBAR WITH CAP AND IS LOCATED AT RM 4811/3301/2005

> NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1095493, 2373 945483, 4374

DESCRIPTION: BASELINE POINT 206 IS A MAG NAIL AND IS LOCATED ON THE SOUTH SIDE OF ROUTE 481 AT RM 4811/3301/2007

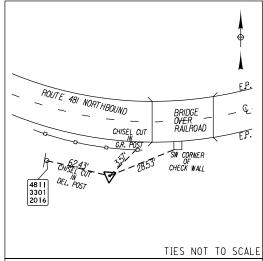
NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1095284, 9774 N۵ E۱ 946513, 8210

DESCRIPTION: B POINT 207 IS AN 18" LONG REBAR WITH CAP AND IS LOCATED ON THE SOUTH SIDE OF ROUTE 481 NORTHBOUND 185± FT EAST OF RM 4811/3301/2012

> NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1094678, 9698 E٤ 949248, 9214

OF RM 4811/3301/2015 NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1094540, 4640 N: 950318,0851

53.68' — — M&R IN 6. DECIDUOUS TREE



TIES NOT TO SCALE

ROUTE 481 NORTH BOUND 4811 3301 2019 TIES NOT TO SCALE TIES NOT TO SCALE

TIES NOT TO SCALE I-481 - BSTA. 2248+69.69 I-481 - BSTA. 2256+21.51

DESCRIPTION: B POINT 223 IS AN 18" LONG REBAR DESCRIPTION: B POINT 905 AN 4'LONG REBAR WITH CAP AND IS LOCATED ON ROUTE 481 WITH CAP AND IS LOCATED ON THE EASTERLY SIDE OF ROUTE 481, 150' NORTHEAST OF RM ±25' SOUTHWEST OF RM 4811/3301/2044 4811/3301/2043

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1104995.8570

2044

I-481 - BSTA. 2108+21.33

DESCRIPTION: B POINT 209 IS AN 18" LONG REBAR WITH CAP AND IS LOCATED ON THE SOUTH SIDE OF ROUTE 481 60' FT EAST OF RM 4811/3301/2016

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1094773. 1631 N: E: 951193.1550

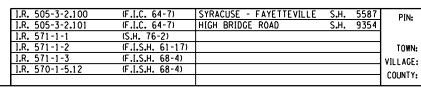
I-481 - BSTA. 2115+72.64

DESCRIPTION: B POINT 210 IS AN 18" LONG REBAR WITH CAP AND IS LOCATED ON THE SOUTH SIDE OF 481 NORTHBOUND 90' FT EAST OF THE EAST END OF THE BRIDGE OVER THE RAILROAD.

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 N: 1095207.7723 951806.0106

I-481 - BSTA. 2124+93.22 DESCRIPTION: B POINT 211 IS AN 18" LONG REBAR WITH CAP AND IS LOCATED ON THE SOUTH SIDE OF ROUTE 481 NORTHBOUND 150± FT EAST OF RM 4811/3301/2019

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1095835.1311 952479.7180 N۱



3501.91 BRIDGES

ONONDAGA

TOWN:

N: 1104313.3790

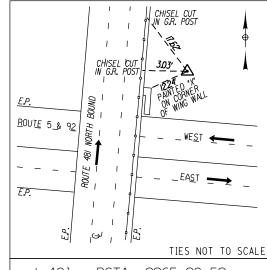
CULVERTS

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED I-81 VIADUCT PROJECT - PHASE 1, CONTRACT : HIGHWAY BOUNDARY PLAN

CONTRACT NUMBER D900056

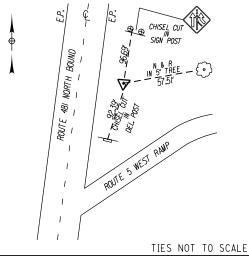
DRAWING NO.: 350191\_C2-HBP SHEET NO.: 27 OF 28





I-481 - BSTA. 2265+28.52 DESCRIPTION: B POINT 906 IS A 4' LONG REBAR WITH ALUMINUM CAP AND IS LOCATED ON EASTERLY SIDE OF 481, AT THE NORTH EAST END OF THE BRIDGE OVER ROUTES 5 & 92 EAST

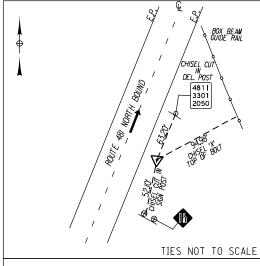
OF THE EASTERLY EDGE ON THE ASPHALT SHOULDER NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1105768, 5540 960360,7450



I-481 - BSTA. 2274+72.33

DESCRIPTION: B POINT 224 IS AN 18" LONG REBAR WITH CAP AND IS LOCATED ON ROUTE 481 600' ± NORTHEAST OF THE ROUTE 5 WEST RAMP

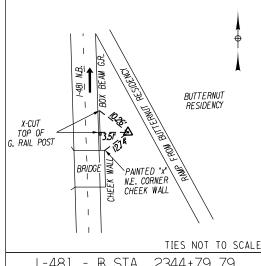
NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1106573, 2096 960854.0032



I-481 - BSTA. 2285+57.59

DESCRIPTION: B POINT 225 IS AN 18" LONG REBAR WITH CAP AND IS LOCATED ON ROUTE 481 60' ± SOUTHWEST OF RM 4811/3301/2050

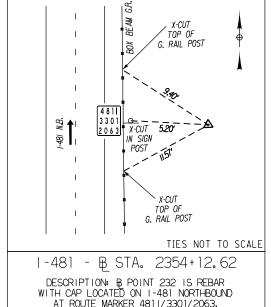
NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1107485, 7948 961441.357



I-481 - В STA. 2344+79.79

DESCRIPTION: B POINT 231 IS REBAR WITH CAP AND IS LOCATED ON THE NORTHEAST CORNER OF BRIDGE AT THE BUTTERNUT RESIDENCY

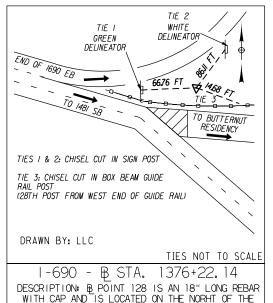
NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1113141, 3909 N: E: 962724.5749



AT ROUTE MARKER 4811/3301/2063.

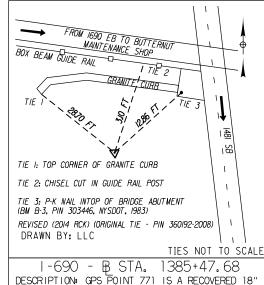
NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1114067, 1485 962609, 9835

### 2014 I-690 SURVEY BASELINE

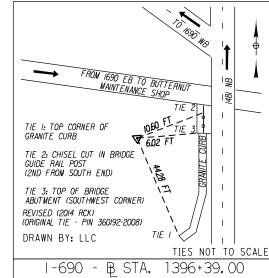


1690 EASTBOUND RAMP TO 1481 SOUTHBOUND, 975 FT WEST OF SOUTHWEST CORNER OF THE BUTTERNUT MAINTENANCE SHOP ACCESS BRIDGE OVER 1481 SOUTHBOUND

NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1113197.478 960986.706



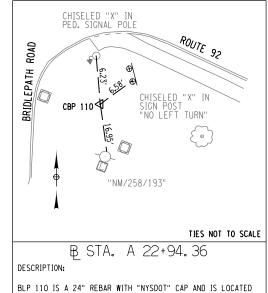
LONG REBAR WITH CAP (PIN 360192) AND IS LOCATED ON THE SOUTH SIDE OF THE 1690 EASTBOUND ACCESS RAMP TO THE BUTTERNUT MAINTENANCE SHOP, 53 FT: WEST OF THE SOUTHWEST CORNER OF THE BUTTERNUT MAINENANCE SHOP ACCESS BRDIGE OVER 1481 SB NYSPCS CENTRAL ZONE NAD 83/CORS 2011 1112598,649 961692.419



DESCRIPTION: GPS POINT 772 IS A RECOVERED 18" LONG REBAR WITH CAP (PIN 360192) AND IS LOCATED ON THE WEST SIDE OF 1481 NORTHBOUND, 30 FT±

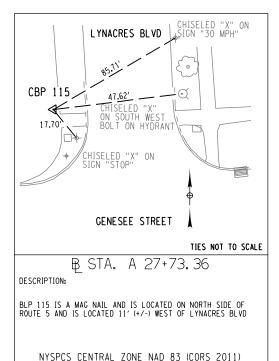
SOUTH OF THE SOUTH BRIDE JOINT OF THE 1481 NORHTBOUND BRIDGE OVER THE 1690 EASTBOUND ACCESS RAOD TO THE BUTTERNUT MAINTENACE SHOP NYSPCS CENTRAL ZONE NAD 83/CORS 2011 Na 1112334,080 962751, 175

# 2019 SURVEY BASELINE (S.H. 5587)



BLP 110 IS A 24" REBAR WITH "NYSDOT" CAP AND IS LOCATED ON SOUTH SIDE OF 5 & 92 AND IS 38' (+/-) EAST OF BRIDLEPATH ROAD CENTERLINE

NYSPCS CENTRAL ZONE NAD 83 (CORS 2011) 1103722.9729 N٠ 964202.0938 E:



1103864.6550

964659.6517

I.R. 505-3-2.100 (F.I.C. 64-7) SYRACUSE - FAYETTEVILLE S.H. 5587 .R. 505-3-2.101 (F.I.C. 64-7) HIGH BRIDGE ROAD S.H. 9354 I.R. 571-1-1 (S.H. 76-2) .R. 571-1-2 (F.I.S.H. 61-17) I.R. 571-1-3 I.R. 570-1-5.1 (F.I.S.H. 68-4) (F.I.S.H. 68-4)

3501.91 BRIDGES CULVERTS TOWN: VILLAGE: COUNTY: ONONDAGA

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED I-81 VIADUCT PROJECT - PHASE 1. CONTRACT : HIGHWAY BOUNDARY PLAN

N٠

Ε:

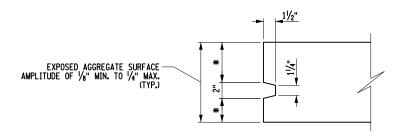
CONTRACT NUMBER D900056

DRAWING NO.: 350191\_C2-HBP SHEET NO.: 28 OF 28

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

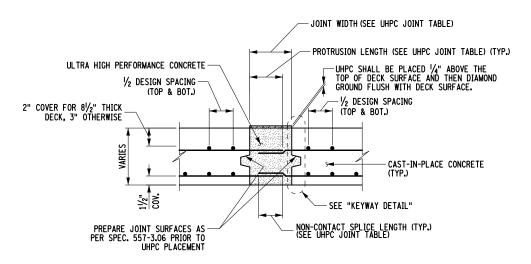


# **Structural Details**



\* - PROVIDE DIMENSION TO AVOID INTERFERENCE WITH THE REINFORCEMENT.

#### KEYWAY DETAIL

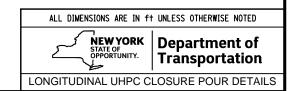


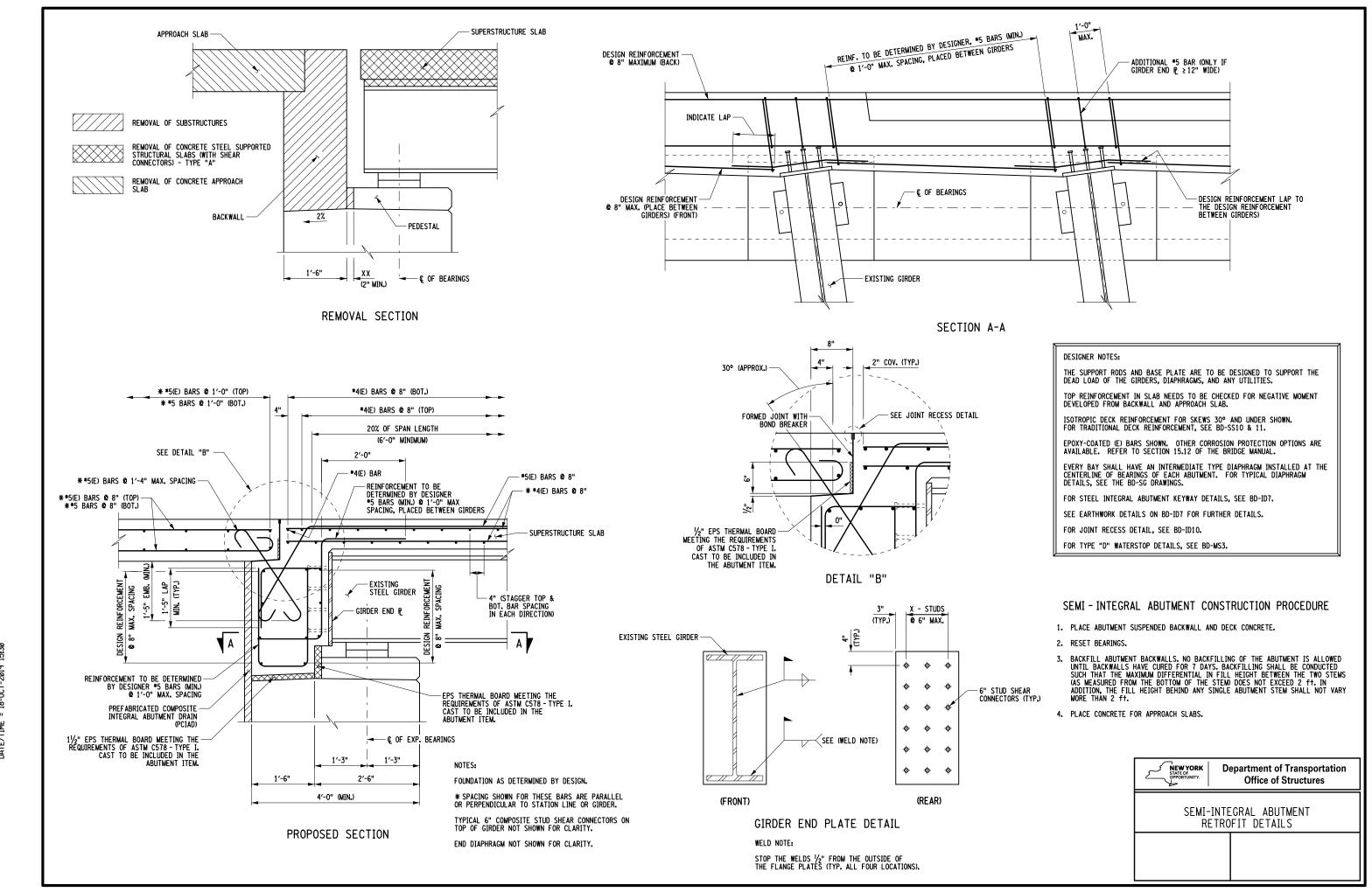
LONGITUDINAL UHPC JOINT

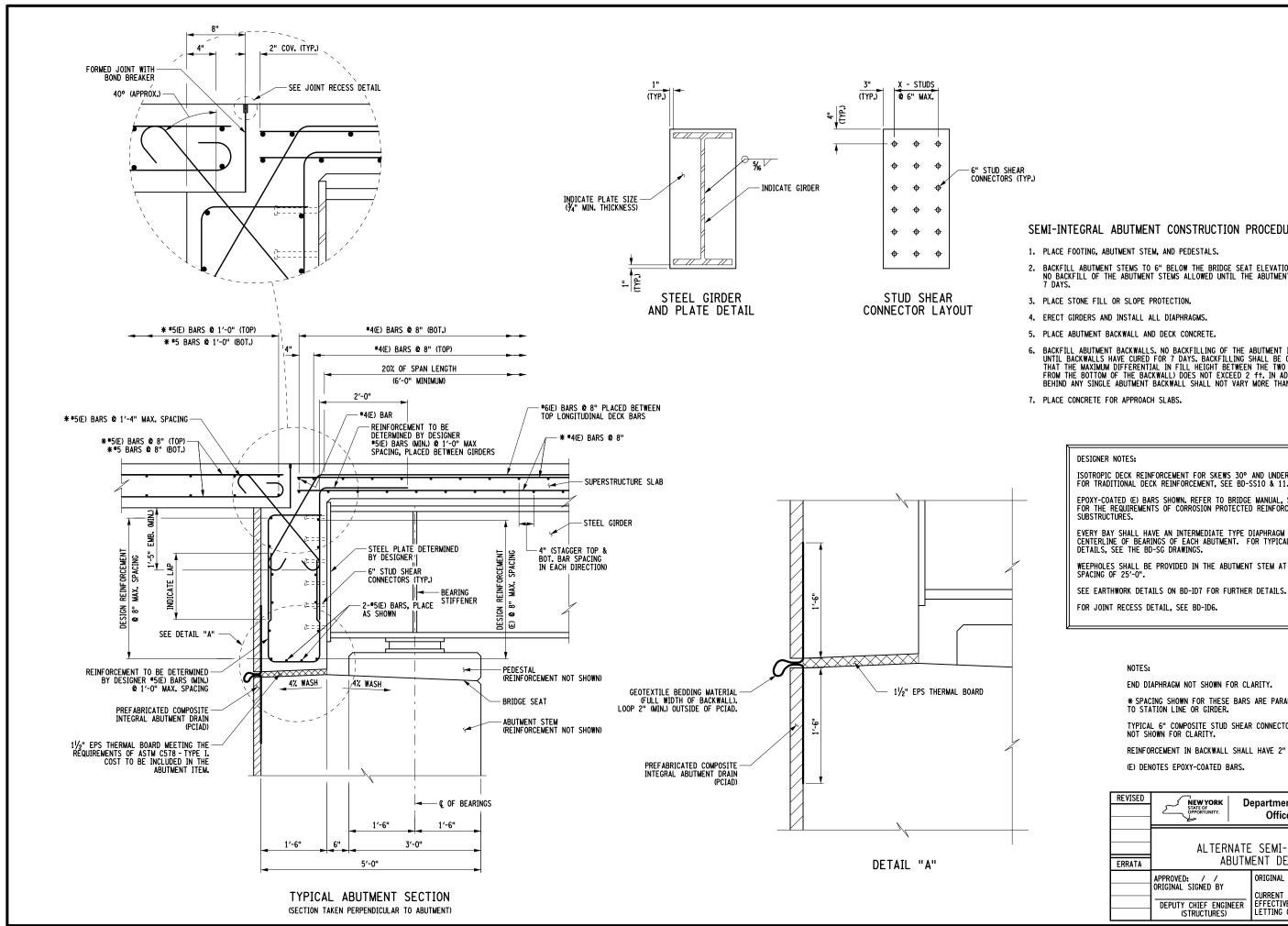
UHPC JOINT TABLE								
BAR SIZE	PAR SIZE JOINT PROTRUSION SPLICE CLEAR SPACING							
DAK SIZE	WIDTH	LENGTH	LENGTH	MINIMUM	MAXIMUM			
*4	*4 6" 5" 4" 1"							
<b>*</b> 5	7"	6"	5"	11/4"	5"			
#6	9"	71/2"	6"	11/2"	6"			

DESIGNER NOTE:

UHPC JOINT TABLE IS APPLICABLE FOR ALL BAR TYPES WITH A YIELD STRENGTH NO GREATER THAN 75 KSI.







#### SEMI-INTEGRAL ABUTMENT CONSTRUCTION PROCEDURE

- 1. PLACE FOOTING, ABUTMENT STEM, AND PEDESTALS.
- 2. BACKFILL ABUTMENT STEMS TO 6" BELOW THE BRIDGE SEAT ELEVATION. NO BACKFILL OF THE ABUTMENT STEMS ALLOWED UNTIL THE ABUTMENTS HAVE CURED FOR
- 3. PLACE STONE FILL OR SLOPE PROTECTION.
- 4. ERECT GIRDERS AND INSTALL ALL DIAPHRAGMS.
- 5. PLACE ABUTMENT BACKWALL AND DECK CONCRETE.
- 6. BACKFILL ABUTMENT BACKWALLS. NO BACKFILLING OF THE ABUTMENT IS ALLOWED UNTIL BACKWALLS HAVE CURED FOR 7 DAYS. BACKFILLING SHALL BE CONDUCTED SUCH THAT THE MAXIMUM DIFFERENTIAL IN FILL HEIGHT BETWEEN THE TWO ABUTMENTS (AS MEASURED FROM THE BOTTOM OF THE BACKWALL) DOES NOT EXCEED 2 ft. IN ADDITION, THE FILL HEIGHT BEHIND ANY SINGLE ABUTMENT BACKWALL SHALL NOT VARY MORE THAN 2 ft.
- 7. PLACE CONCRETE FOR APPROACH SLABS.

#### DESIGNER NOTES:

ISOTROPIC DECK REINFORCEMENT FOR SKEWS 30° AND UNDER SHOWN. FOR TRADITIONAL DECK REINFORCEMENT, SEE BD-SS10 & 11.

EPOXY-COATED (E) BARS SHOWN. REFER TO BRIDGE MANUAL, SECTION 15.12 FOR THE REQUIREMENTS OF CORROSION PROTECTED REINFORCEMENT IN

EVERY BAY SHALL HAVE AN INTERMEDIATE TYPE DIAPHRAGM INSTALLED AT THE CENTERLINE OF BEARINGS OF EACH ABUTMENT. FOR TYPICAL DIAPHRAGM DETAILS, SEE THE BD-SG DRAWINGS.

WEEPHOLES SHALL BE PROVIDED IN THE ABUTMENT STEM AT A MAXIMUM SPACING OF 25'-0".

FOR JOINT RECESS DETAIL, SEE BD-ID6.

END DIAPHRAGM NOT SHOWN FOR CLARITY.

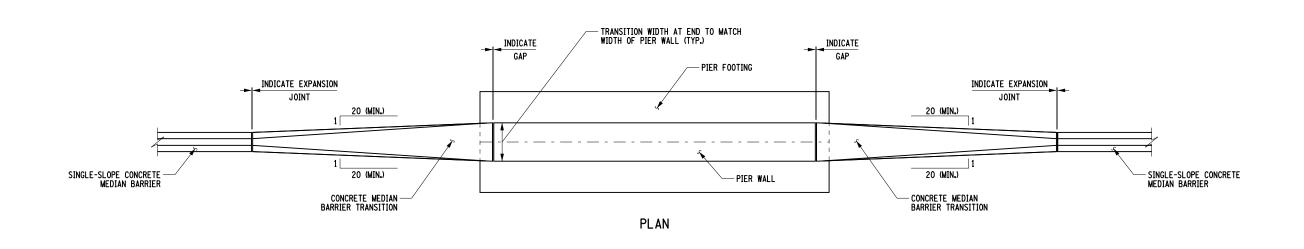
\* SPACING SHOWN FOR THESE BARS ARE PARALLEL OR PERPENDICULAR TO STATION LINE OR GIRDER.

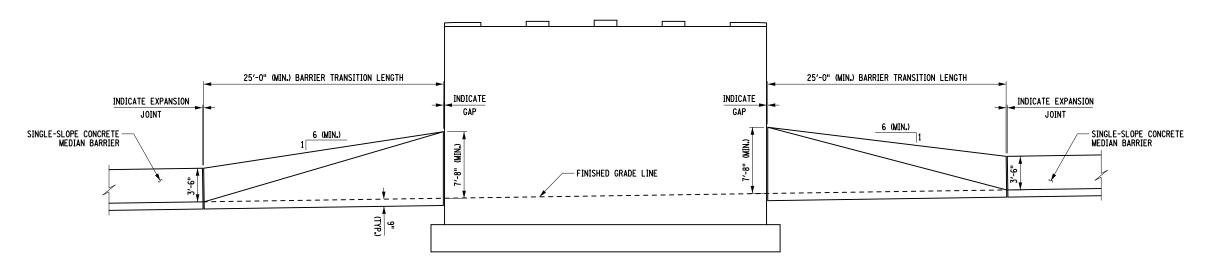
TYPICAL 6" COMPOSITE STUD SHEAR CONNECTORS ON TOP OF GIRDER NOT SHOWN FOR CLARITY.

REINFORCEMENT IN BACKWALL SHALL HAVE 2" COVER.

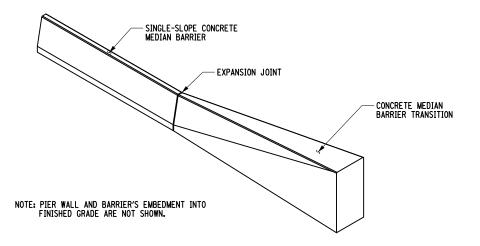
(E) DENOTES EPOXY-COATED BARS.

REVISED	NEW YORK STATE OF OPPORTUNITY.	epartment of Transportation Office of Structures
		SEMI-INTEGRAL
ERRATA	ABUIM	ENT DETAILS
	APPROVED: / / ORIGINAL SIGNED BY	ORIGINAL ISSUED UNDER EB CURRENT ISSUED UNDER EB
	DEPUTY CHIEF ENGINEER (STRUCTURES)	EFFECTIVE WITH THE LETTING OF //



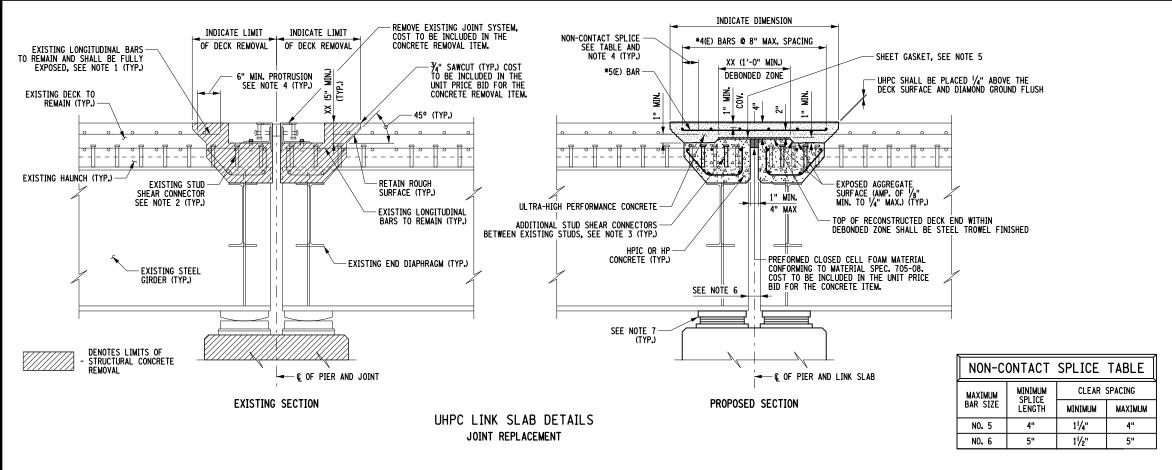


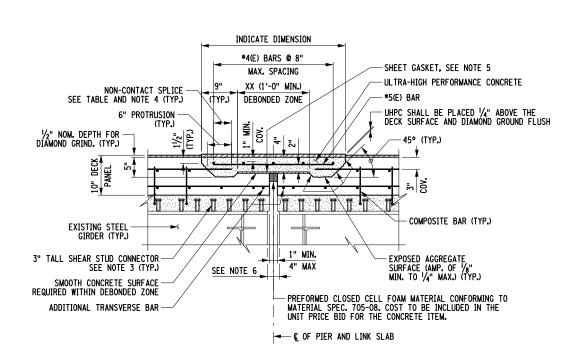
ELEVATION



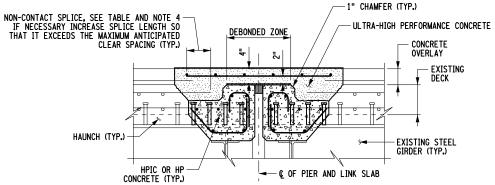
ISOMETRIC OF BARRIER TRANSITION

NEW YORK STATE OF OPPORTUNITY.	D	epartment of Transportation Office of Structures
BARRIER TO	PIE	R TRANSITION DETAILS
/ / IGNED BY:		ORIGINAL ISSUED UNDER EB
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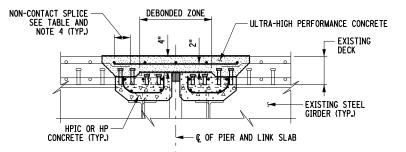




UHPC LINK SLAB DETAIL
PRECAST DECK PANELS
(DECK REPLACEMENT SHOWN, NEW SUPERSTRUCTURE SIMILAR)



SCHEMATIC UHPC LINK SLAB DETAIL
JOINT REPLACEMENT - CONCRETE OVERLAY



SCHEMATIC UHPC LINK SLAB DETAIL JOINT REPLACEMENT - WITHOUT GIRDER HAUNCH

#### DESIGNER NOTES:

THE EPOXY COATED BARS SHOWN MAY NEED TO BE CHANGED TO MEET THE REINFORCEMENT CORROSION PROTECTION REQUIREMENTS SPECIFIED IN THE BRIDGE MANUAL.

THE MINIMUM GIRDER END GAP SHALL BE INDICATED IN THE NOTES.
THIS GAP SHALL BE MAXIMIZED TO THE LARGEST EXTENT FEASIBLE
WHILE CONSIDERING THE EXISTING GAP, ALLOWANCES FOR MINOR
AMOUNTS OF SUPERSTRUCTURE MOVEMENT/SHIFTING DURING
CONSTRUCTION OPERATIONS, AND PREVENTING THE GIRDER'S BOTTOM
FLANGES FROM CONTACTING EACH OTHER WHEN ADJOINING SPANS ARE
SIMULTANEOUSLY SUBJECT TO LIVE LOADS.

THE PRECAST DECK PANELS DETAIL DEPICTS TRADITIONAL REINFORCEMENT AND A STANDARD UHPC HAUNCH. THIS DETAIL SHALL BE MODIFIED WHEN USING ISOTROPIC REINFORCEMENT AND/OR A LOW PROFILE HAUNCH.

WHEN USING AN ASPHALT OVERLAY, IT SHALL BE PLACED OVER THE UHPC LINK SLAB. PLACING THE UHPC 0.25 INCHES ABOVE THE CONCRETE DECK SURFACE AND GRINDING FLUSH IS STILL REQUIRED.

SCHEMATIC DETAILS ARE ONLY INTENDED TO SHOW ACCEPTABLE MODIFICATIONS TO THE LINK SLAB, AND DECK END, GEOMETRY FOR VARIOUS EXISTING CONDITIONS. ALL OF THE REQUIREMENTS AND ANNOTATIONS PROVIDED IN THE UHPC LINK SLAB JOINT REPLACEMENT DETAILS SHALL APPLY AND BE SHOWN ON THE CONTRACT PLANS.

#### NOTES:

- 1. WHERE EXISTING BARS ARE DAMAGED DURING REMOVAL OF EXISTING DECK CONCRETE, DRILL AND GROUT \*5(E) DOWELS CENTERED BETWEEN EXISTING DECK BARS TO MATCH SPACING AT NO COST TO THE STATE. GROUT MATERIAL CONFORMING TO NYS MATERIAL SPECIFICATION 701-05 INSTALLED IN ACCORDANCE WITH THE NYS STANDARD SPECIFICATION SECTION 586-3.01. NON-DESTRUCTIVE INVESTIGATION AND PULL DILL TEST NOT REGULIEFD.
- 2. EXISTING STUD SHEAR CONNECTORS MAY REMAIN UNLESS THEY INTERFERE WITH THE DEBONDED ZONE OF THE UHPC LINK SLAB.
- 3. STUD SHEAR CONNECTOR SPACING UNDERNEATH THE LINK SLAB SHALL NOT EXCEED 5 INCHES IN ANY DIRECTION. THE USE OF OTHER TYPES OF SHEAR CONNECTORS ARE PROHIBITED.
- 4. LONGITUDINAL REINFORCEMENT SPLICES ARE NOT PERMITTED IN THE DEBONDED ZONE.
- 5. COMPRESSED SYNTHETIC SHEET GASKET (0.0625 INCH THICK SHEET, TREATED BOTH SIDES), CONFORMING TO MATERIAL SPECIFICATION 728-06, SHALL COVER THE ENTIRE SURFACE OF RECONSTRUCTED DECK ENDS, OR PRECAST PANEL ENDS, WITHIN THE DEBONDED ZONE. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR THE CONCRETE ITEM.
- 6. A MINIMUM GIRDER END GAP OF \_\_\_ INCHES SHALL BE PROVIDED BETWEEN ADJACENT SPANS. THIS MUST BE VERIFIED PRIOR TO POURING THE LINK SLAB. ANY ADJUSTMENTS REQUIRED SHALL BE MADE AT NO ADDITIONAL COST TO THE STATE.
- 7. UPON INSTALLATION OF THE PROPOSED BEARINGS, THE CONTRACTOR SHALL INSTALL TEMPORARY BLOCKING TO ENSURE GLOBAL STABILITY OF THE ENTIRE SUPERSTRUCTURE SYSTEM PRIOR TO THE INSTALLATION OF THE LINK SLABIS. THE CONTRACTOR SHALL SUBMIT THE TEMPORARY BLOCKING PROCEDURE TO THE DCES FOR APPROVAL PRIOR TO THE REMOVAL OF THE EXISTING BEARINGS. THE COST OF TEMPORARY BLOCKING SHALL BE INCLUDED IN THE BEARING REMOVAL ITEMS. AS PART OF THE SUBMITTAL, THE CONTRACTOR MUST SUBMIT A SCHEDULE FOR CHECKING THAT THE BLOCKING MECHANISMS INSTALLED ARE FUNCTIONING AS INTENDED, AND FOR PERFORMING ROUTINE MAINTENANCE, SUCH AS MAKING ADJUSTMENTS FOR THE SUPERSTRUCTURE'S THERMAL MOVEMENTS, FOR THE DURATION OF THE TIME THAT THEY REMAIN IN PLACE.
- 8. IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 565-3.05
  AND AFTER ALL LINK SLABS HAVE CURED FOR A MINIMUM OF SEVEN
  DAYS, THE ALIGNMENT OF ALL EXPANSION BEARINGS SHALL BE
  MEASURED AND ADJUSTMENTS MADE IF REQUIRED.
- 9. (E) DENOTES EPOXY COATED BARS.

REVISED	NEW YORK STATE OF OPPORTUNITY.	Department of Transportation Office of Structures
ERRATA	_ · · · ·	C LINK SLAB ILS (1 OF 2)
	APPROVED: / / ORIGINAL SIGNED BY	ORIGINAL ISSUED UNDER EB
	DEPUTY CHIEF ENGINEER (STRUCTURES)	CURRENT ISSUED UNDER EB EFFECTIVE WITH THE LETTING OF / /

EXISTING CONCRETE BARRIER

CONSTRUCTION JOINT (TYP.)

EXISTING BAR TO REMAIN (TYP.) -

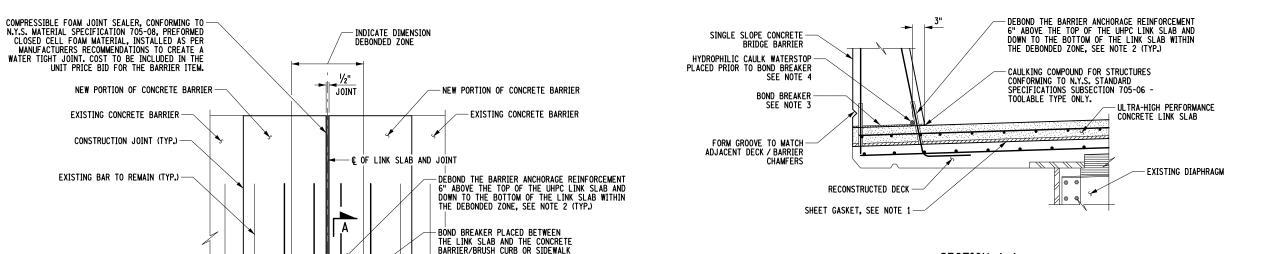
RECONSTRUCTED DECK END (TYP.)

ELEVATION RELIEF JOINT OVER UHPC LINK SLAB
(SINGLE SLOPE CONCRETE BARRIER SHOWN, SIDEWALK AND BRUSH CURB SIMILAR)

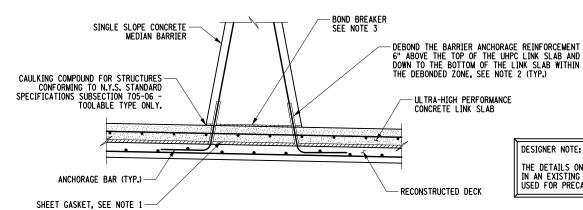
(VERTICAL FACED CONCRETE PARAPET WITH SIDEWALK)

SIDEWALK

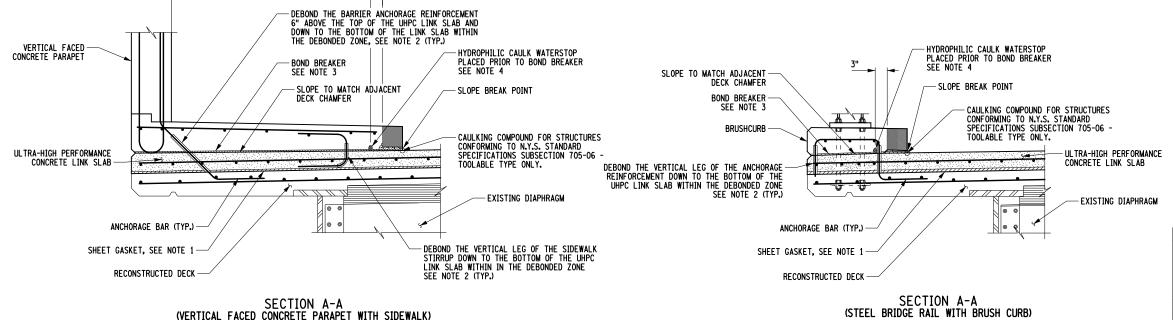
STEEL GIRDER (TYP.)



SECTION A-A (SINGLE SLOPE CONCRETE BRIDGE BARRIER)



SECTION A-A (SINGLE SLOPE CONCRETE MEDIAN BARRIER)



SEE SECTION A-A AND NOTE 3

- EXISTING DECK

ULTRA-HIGH PERFORMANCE

SHEET GASKET, SEE NOTE 1

CONCRETE LINK SLAB

#### DESIGNER NOTE:

THE DETAILS ON THIS DRAWING DEPICT A UHPC LINK SLAB INSTALLED IN AN EXISTING CAST-IN-PLACE DECK. SIMILAR DETAILS SHALL BE USED FOR PRECAST DECK PANELS.

#### NOTES:

- 1. COMPRESSED SYNTHETIC SHEET GASKET (0.0625 INCH THICK SHEET, TREATED BOTH SIDES), CONFORMING TO MATERIAL SPECIFICATION 728-06, SHALL COVER THE ENTIRE SURFACE OF RECONSTRUCTED DECK ENDS, OR PRECAST PANEL ENDS, WITHIN THE DEBONDED ZONE. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR THE CONCRETE ITEM.
- 2. DEBOND ALL REINFORCEMENT THAT EXTENDS OUT OF THE UHPC LINK SLAB WITHIN THE DEBONDED ZONE AS INDICATED IN THE DETAILS. DEBONDING SHALL BE ACCOMPLISHED BY WRAPPING BARS WITH A MINIMUM OF 3 LAYERS OF HEAVY DUTY DUCT TAPE.
- 3. BOND BREAKER USED AT THE INTERFACE OF THE LINK SLAB AND BARRIER, SIDEWALK, OR BRUSH CURB SHALL BE SIKA BONDBREAKER W, WAX BASED BOND BREAKER MATERIAL, OR APPROVED EQUAL.
- 4. THE COST OF THE HYDROPHILIC CAULK/SEAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE LINK SLAB CONCRETE ITEM. THE CAULK/SEAL MANUFACTURER AND INSTALLATION SHALL BE APPROVED BY THE ENGINEER. THE HYDROPHILIC CAULK/SEAL SHALL BE PROTECTED
- 5. THE BARS SHOWN IN THE BARRIER ARE THE ANCHORAGE BARS ORIGINATING IN THE DECK. FOR BARRIER REINFORCEMENT DETAILS SEE THE BD-RCB SERIES.

REVISED	NEW YORK STATE OF OPPORTUNITY.	epartment of Transportation Office of Structures
ERRATA		LINK SLAB ILS (2 OF 2)
	APPROVED: / / ORIGINAL SIGNED BY  DEPUTY CHIEF ENGINEER (STRUCTURES)	ORIGINAL ISSUED UNDER EB CURRENT ISSUED UNDER EB EFFECTIVE WITH THE LETTING OF / /

ANCHOR STUDS | WELD SIZE | WASHER PLATE |

(SQ. In.) CLEARANCE Wm Lm Tm E+ E1 Ez Am Bm DIA. STUDS/BRG. A B AWP BWP Ws Ls T1 T2 WI LI TI

MASONRY PLATE

SOLE PLATE

LOAD PLATE

SLIDING EXPANSION ELASTOMERIC BEARING (TYPE E.B.) TABLE

COMP. AREA SHEAR AREA \* (G) GUIDE

ELASTOMER LAYER

THK/LAYER NO. LAYERS L W D

QUANTITY D.L. + S.D.L. L.L. WITHOUT REQUIRED (Kips)

ITEM NO.

LOCATION

= BD-BG7\_2020-R0E0. = 31-MAY-2022 12:42

FILE NAME DATE/TIME

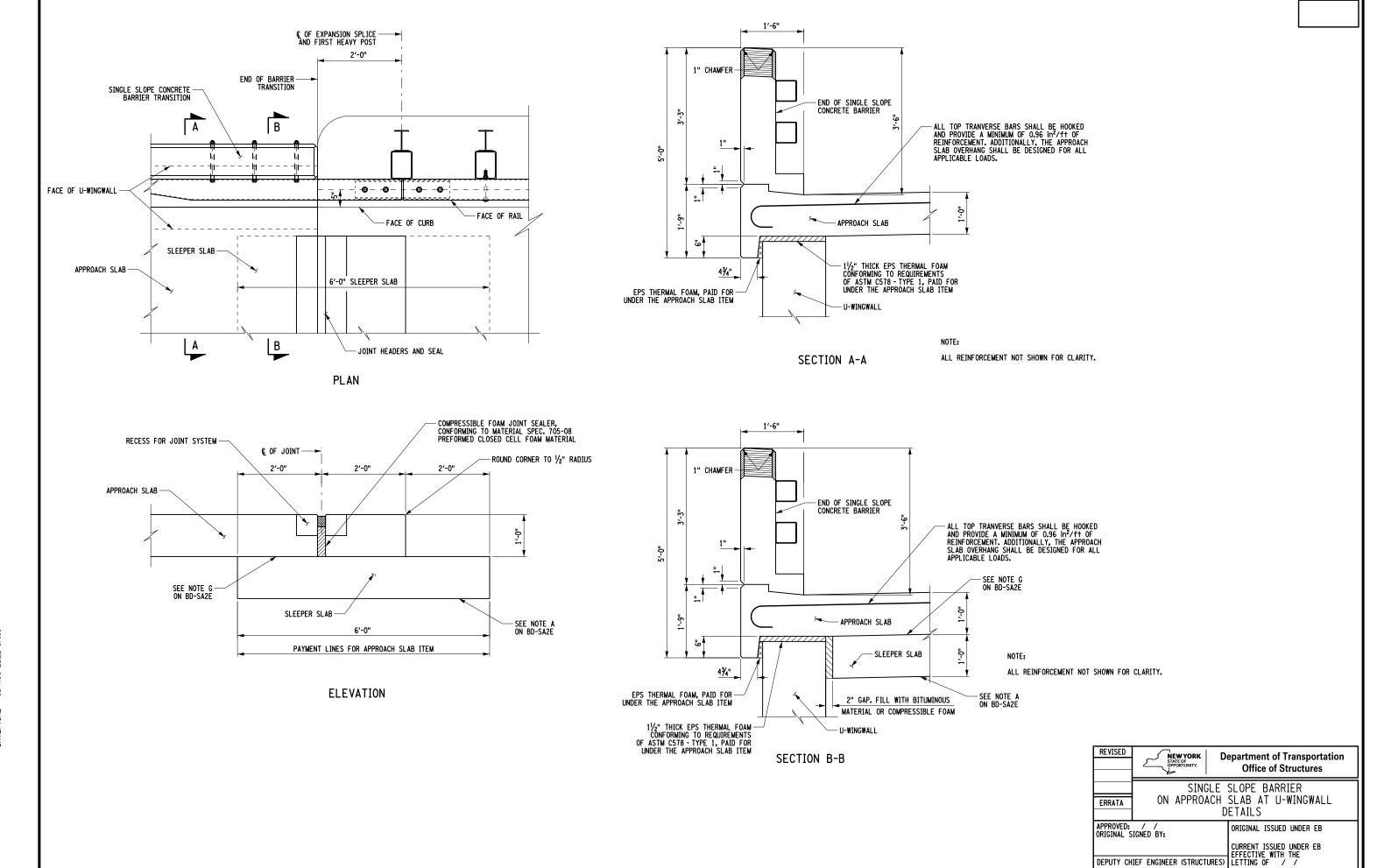
TOTAL DESIGN

SHAPE

BWP Bm

> -¾" THICK WASHER №

> > - C OF SLOT





# **UHPC Link Slab Design**

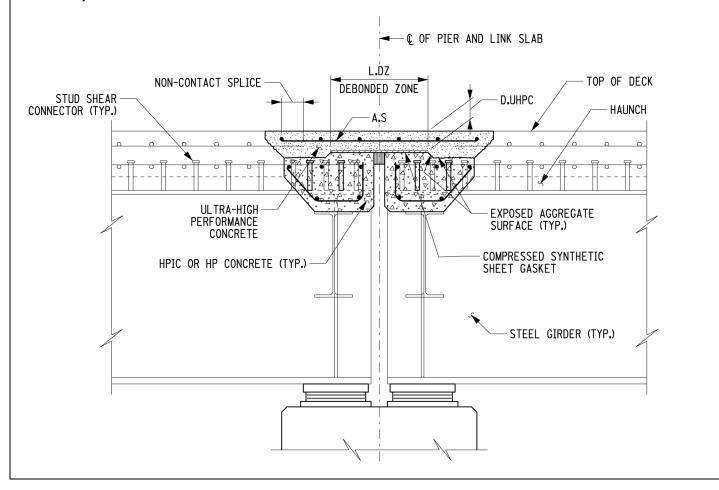
	BIN:	
	PIN:	
Job Title:		

#### **EXAMPLE**

The NYSDOT Office of Structures has developed an innovative link slab design utilizing Ultra-High Performance Concrete (UHPC). The results of our investigation into the behavior of UHPC link slabs showed that the force required to strain the UHPC in pure tension is extremely large and nearly all of the translation, due to the girder's end rotation, will occur at the bearings. Therefore, the link slab design assumes that the UHPC section is subject to bending only. Although not accounted for in the design of the link slab, due to the conservative approach taken for bending, the link slab also acts as a semi-rigid link that transfers lateral loads between spans.

Our design uses a strain based analysis, where the extreme fiber tensile strain in the UHPC is determined by the amount of girder end rotation, under the assumption of linearly elastic flexural behavior. Using stress-strain relationships, the location of the neutral axis is found through an iterative algorithm. Upon convergence of the assumed and calculated neutral axis location, the tensile strain and compressive stress in the UHPC, along with the stress in the longitudinal steel reinforcement, is computed and compared to allowable values.

In tension, UHPC develops closely spaced micro-cracks as a result of its high strength steel fibers being dispersed throughout a matrix of fine aggregates and supplementary cementitious materials. Due to this unique tensile behavior, UHPC has the ability to withstand ultimate tensile strains up to 0.007. It is this attribute that allows UHPC link slabs to accommodate the girder's end rotations within a relatively short length. For design, a maximum strain of 0.0035 at the extreme tensile fiber was chosen in order to limit the crack widths to a level that will not permit the penetration of moisture and chlorides, ensuring a highly durable solution for the elimination of deck joints.





# **UHPC Link Slab Design**

#### **EXAMPLE**

### **User Inputs**

- Indicates user input

 $f_v := 60 \text{ksi}$ 

reinforcement yield strength

 $E_s := 29000 ksi$ 

reinforcement modulus of elasticity (LRFD 5.4.3.2)

$$A_{S} := \frac{0.31 \text{in}^2}{8 \text{in}} = 0.47 \cdot \frac{\text{in}^2}{\text{ft}}$$

area of longitudinal reinforcement at joint

 $\theta_{LL} := 0.00506 \text{ rad}$ 

unfactored live load girder end rotation (use average rotation of linked spans if they are not equal)

 $L_{dz} := 16in$ 

debonded zone length

 $d_{bf} := 6.32ft$ 

vertical distance from top of deck to bottom of bottom flange

Note: The following inputs are standard and not editable by the user.

 $E_c := 8000 ksi$ 

**UHPC** compressive modulus of elasticity

 $f_{uhpc.t.all} := 1.2ksi$ 

UHPC tensile cracking stress

 $f_{uhpc.c.all} := -14ksi$ 

maximum allowable UHPC compressive stress

$$\varepsilon_{\text{uhpc.t.all}} := 3500 \ 10^{-6}$$

maximum allowable UHPC tensile strain

 $d_{uhpc} := 4in$ 

depth of UHPC

# Flexural Analysis of Link Slab

width of section b := 1 ft

 $A_s := A_s \cdot b = 0.47 \cdot in^2$ 

area of reinforcement within section

 $c := \begin{bmatrix} eci \leftarrow 1 & 10^{-6} \\ ec \leftarrow 1 \\ i \leftarrow 1 \end{bmatrix}$ 

iterative algorithm to determine distance from bottom of section to neutral axis

while eci < ec

 $h := \, d_{uhpc} = 4.0 \cdot in \qquad \text{ depth of UHPC}$ 

 $f_t := f_{uhpc.t.all} = 1.2 \cdot ksi$ 

assumed maximum tensile stress of UHPC

 $\theta := 1.75 \cdot \theta_{LL} = 0.51 \cdot \deg$ 

Strength I girder end rotation

$$fc \leftarrow eci \cdot E_c$$

$$c \leftarrow \frac{\sqrt{A_s^2 \cdot E_s^2 \cdot eci}^2 + fc \cdot A_s \cdot E_s \cdot b \cdot h \cdot eci + b^2 \cdot f_t^2 \cdot h^2} + b \cdot f_t \cdot h - A_s \cdot E_s \cdot eci}{b \cdot f_c + 2 \cdot b \cdot f_t}$$

$$ec \leftarrow \frac{-2 \cdot \theta \cdot c}{L_{dz}}$$

$$eci \leftarrow eci + 0.1 \cdot 10^{-6}$$

$$i \leftarrow i + 1$$

out 
$$\leftarrow$$
 "Error" if  $(c < 0 \text{in}) \lor (c > d_{uhpc}) \lor \left(\frac{\text{max}(|ec|, eci)}{\text{min}(|ec|, eci)} - 1 > 5\%\right)$ 

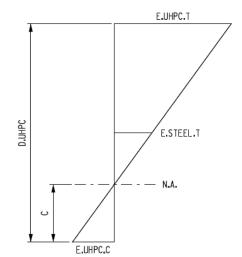
out  $\leftarrow$  c otherwise

return out

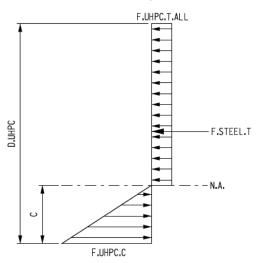
# UHPC Link Slab Design

#### **EXAMPLE**

#### Strain Diagram



#### Stress Diagram



distance from bottom of section to neutral axis  $c = 1.04 \cdot in$ 

$$\varepsilon_{uhpc.t} \coloneqq \frac{2 \cdot \theta \cdot \left(d_{uhpc} - c\right)}{L_{dz}} = 3280 \cdot 10^{-6} \qquad \text{tensile strain in UHPC}$$

$$\varepsilon_{s.t} \coloneqq \frac{2 \cdot \theta \cdot \left(\frac{d_{uhpc}}{2} - c\right)}{L_{dz}} = 1067 \cdot 10^{-6} \qquad \text{tensile strain in reinforcement}$$

$$f_{s,t} \coloneqq \epsilon_{s,t} \cdot E_s = 30.93 \cdot ksi \qquad \qquad \text{tensile stress in reinforcement}$$

$$\varepsilon_{uhpc.c} \coloneqq \frac{-2 \cdot \theta \cdot c}{L_{dz}} = -1147 \cdot 10^{-6}$$
 compressive strain in UHPC

$$f_{uhpc.c} \coloneqq \epsilon_{uhpc.c} \cdot \mathrm{E}_c = -9.18 \cdot \mathrm{ksi} \qquad \qquad \text{compressive stress in UHPC}$$

$$d_{gap.min} \coloneqq 2 \cdot \theta \cdot \left\lceil d_{bf} - \left( d_{uhpc} - c \right) \right\rceil = 1.29 \cdot in \qquad \text{minimum required girder end gap}$$

### **Analysis Results**

$$R = \begin{pmatrix} \text{"Analysis Criteria"} & \text{"Actual"} & \text{"Allowable"} & \text{"Design Ratio"} & \text{"Pass/Fail"} \\ \text{"Tensile Strain in UHPC } (\mu\epsilon)\text{"} & 3280.41 & 3500.00 & 1.07 & \text{"Pass"} \\ \text{"Stress in Reinforcement (ksi)"} & 30.93 & 60.00 & 1.94 & \text{"Pass"} \\ \text{"Compressive Stress in UHPC } (\mu\epsilon)\text{"} & -9.18 & -14.00 & 1.53 & \text{"Pass"} \\ \text{"Minimum Girder End Gap (in)"} & \text{"----"} & 1.29 & \text{"----"} & \text{"----"} \\ \end{pmatrix}$$

Hazardous	<b>Waste Cont</b>	aminated Ma	terials Addit	ional Inform	nation
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95 Perry Street Suite 300

120 East Washington Street Suite 414 Syracuse, NY 13202

325 Gold Street Suite 701 Brooklyn, NY 11201



#### Memorandum

To: File

From: Justin Kellogg, M.S., QEP, Senior Environmental Engineer

Date: October 13, 2022

Subject: I-81 VIADUCT PROJECT - PHASE 1, CONTRACT 2

PIN 3501.91

Hazardous Waste/Contaminated Materials Additional Information for Contract 2 RFP

Watts Project Number 13092

The purpose of this Memorandum is to identify additional information that would assist in the bidding process for the I-81 Viaduct Project - Phase 1, Contract 2 Request for Proposal (RFP).

Hazardous waste/contaminated materials assessments have identified those properties where either contaminated soils and groundwater or underground storage tanks primarily used for petroleum sales are suspected to be present. Information describing the specific sites of concern is found in the Hazardous Waste/Contaminated Materials Screening Assessment Report dated February 2020. The aforementioned document was prepared for a larger project footprint than the Contract 2 project limits. This Memorandum identifies the sites of potential environmental concern that are found within or adjacent to the Contract 2 project limits. Please refer to the abovementioned document for additional information on the sites of potential environmental concern.

The 26 sites in the table below are in the vicinity of the Design-Build Contract 2 project corridor and were identified as potentially contaminated; however, only five of these sites (shown in bold in the table below) are considered to have a higher probability of contamination being present. One of the five bolded sites in the table below has assumed contamination present (Site 3.2.5) and the remaining four of the bolded sites (Sites 3.2.17, 3.2.18, 3.4.3, and 3.4.4) are currently undergoing a field environmental investigation and the results will be presented in an amendment to the bid documents at a later date.

The 21 other sites in the table below, that are not shown in bold, are considered to have a low probability of contamination and are called out as an advisory that the Design-Builder should be on the lookout and aware of the potential for contamination in the vicinity of these sites.

Site ID #	Property Name and Address	Current or Former Use	Potential Environmental Concerns	Notes
3.2.1	I-481: I-90 - Route 592 Interchange	Roadway Corridor	Chemical/Solvent Contamination, Petroleum Contamination	Roadway corridor, spills are too scattered to identify them specifically. The Design-Builder should be made aware of the potential for encountering contaminated soil within the roadway corridor due to historic uses.

# Watts Architects &Engineers

I-81 VIADUCT PROJECT - PHASE 1, CONTRACT 2 PIN 3501.91 Hazardous Waste/Contaminated Materials Additional Information for Contract 2 RFP Watts Project Number 13092

Site ID #	Property Name and Address	Current or Former Use	Potential Environmental Concerns	Notes
3.2.5	CSX: DeWitt Railroad Yard	Railroad	Chemical/Solvent Contamination	No field investigation will be performed at this site prior to bid; however, some quantity of contaminated soil is assumed, in the bid documents, to be encountered during construction. It is recommended that the Design-Build Contractor investigate the site to identify potential contaminated soil concerns in this area.
3.2.6	Penske Truck Rental: 6755-6773 Manlius Center Rd	Automobile Related, USTs	Petroleum Contamination, Abandoned USTs	Edge of disturbance area, but tanks were likely near the building, and I-481 is elevated (for the bridge crossings) in comparison to this site.
3.2.7	84 Lumber: 6801 Manlius Center Rd	Lumber Yard and USTs	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	Edge of disturbance area, but no ROW takes, there is a substantial drainage ditch between the property and roadway, and I-481 is quite elevated (for the bridge crossings) in comparison to this site.
3.2.8	Allied Spring & Services Inc: 6800 Manlius Center Rd	Automobile Related, USTs	Chemical/Solvent Contamination, Petroleum Contamination	No ROW takes and construction not adjacent.
3.2.9	B&C Self- Storage: 5991 Drott Dr	Automobile Related, USTs	Petroleum Contamination, Abandoned USTs	Construction is within ROW and not adjacent to this site. Contamination, if present, is likely off the ROW.
3.2.10	I-481: Route 5 and 92 Interchange	Automobile Related, USTs	Petroleum Contamination	Roadway corridor, spills are too scattered to identify each one. The Design-Builder should be made aware of the potential for encountering contaminated soil within the roadway corridor.
3.2.11	State Farms Insurance: 5005 E. Genesee St.	Automobile Related, USTs	Petroleum Contamination, Abandoned USTs	Long-time former gas station adjacent to the ROW; but, no adjacent excavation anticipated. No project impact anticipated unless acquisition or adjacent excavation required.
3.2.12	Shopping Plaza: 6789-6837 E. Genesee St	Automobile Related, Dry Cleaner, and USTs	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	No ROW takes but former gas station and dry cleaner adjacent to the ROW (large area as well); but, no adjacent excavation anticipated. No project impact anticipated unless acquisition or adjacent excavation required.
3.2.13	Vacant Retail Plaza: 6810-6816 E. Genesee St	Dry Cleaner	Chemical/Solvent Contamination	Dry cleaner adjacent to ROW; but, no adjacent excavation anticipated. No project impact anticipated unless acquisition or adjacent excavation required.
3.2.14	Shopping Plaza: 6820 E. Genesee St.	Automobile Related, USTs	Petroleum Contamination, Abandoned USTs	Former gas stations adjacent to the ROW; but, no adjacent excavation anticipated. No project impact anticipated unless acquisition or adjacent excavation required.

**Watts** 

# Watts Architects &Engineers

I-81 VIADUCT PROJECT - PHASE 1, CONTRACT 2 PIN 3501.91 Hazardous Waste/Contaminated Materials Additional Information for Contract 2 RFP Watts Project Number 13092

Site ID #	Property Name and Address	Current or Former Use	Potential Environmental Concerns	Notes
3.2.15	Law Office: 6832 E. Genesee St	Automobile Related, USTs	Petroleum Contamination	Former gas stations adjacent to the ROW; but, no adjacent excavation anticipated. No project impact anticipated unless acquisition or adjacent excavation required.
3.2.16	Storefronts: 6848 E. Genesee St	Lock Co. & Photo Studio	Chemical/Solvent Contamination	No known tanks no adjacent excavation anticipated.  No project impact anticipated unless acquisition or adjacent excavation required.
3.2.17	Shopping Plaza: 6901-6903 E. Genesee St	Automobile Related, Dry Cleaner, and USTs	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	A field investigation of this site is currently being performed and the results will be presented in an amendment to the bid documents at a later date. This is the location of a former gas station and dry cleaner adjacent to the ROW. Construction at this corner may include a signal pole installation or other minor construction work.
3.2.18	Speedway: 6896 E. Genesee St	Automobile Related, USTs	Petroleum Contamination, Abandoned USTs	A field investigation of this site is currently being performed and the results will be presented in an amendment to the bid documents at a later date. Full depth reconstruction is planned at this former gas station adjacent to the ROW.
3.2.19	Industrial Color Lab: 6890 Highbridge Rd.	Printing Company	Chemical/Solvent Contamination	No known tanks and the facility was opened in approximately 1992. Lower probability of project impact.
3.4.1	I-81/I-481 South Interchange	Roadway Corridor, Former Railroad Corridor	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	Roadway corridor, spills are too scattered to identify them specifically. The Design-Builder should be made aware of the potential for encountering contaminated soil within the roadway corridor due to historic uses.
3.4.2	New York, Susquehanna & Western Railway Corp.	Railroad	Chemical/Solvent Contamination	No acquisition or excavation directly adjacent to the railroad. Also, roadway is at a higher level on an embankment from the railroad. Lower probability of project impact.
3.4.3	Loretto Health & Rehabilitation Center: 700 E. Brighton Ave	USTs	Petroleum Contamination, Abandoned USTs	A field investigation of this site is currently being performed and the results will be presented in an amendment to the bid documents at a later date. This site is associated with past tanks and a spill that was not cleaned to standards.
3.4.4	Jaquith Industries Inc: 600 E. Brighton Ave	Manufacturing, USTs	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	A field investigation of this site is currently being performed and the results will be presented in an amendment to the bid documents at a later date. The site is associated with many USTs.

**Watts** 

## Watts Architects &Engineers

I-81 VIADUCT PROJECT - PHASE 1, CONTRACT 2 PIN 3501.91 Hazardous Waste/Contaminated Materials Additional Information for Contract 2 RFP Watts Project Number 13092

Site ID	Property Name and Address	Current or Former Use	Potential Environmental Concerns	Notes
3.4.5	Warehouse: 621 E. Brighton Ave	Warehouse, Solid Waste Landfill, USTs	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	No acquisition or adjacent excavation. Site is at a lower elevation and across the railroad tracks from the closest roadway reconstruction. Lower probability of project impact.
3.4.6	Milton CAT: 238-294 Ainsley Dr	Railroad, Automobile Related	Chemical/Solvent Contamination, Petroleum Contamination	No acquisition or adjacent excavation. Site is at a lower elevation and across the railroad tracks from the closest roadway reconstruction. Lower probability of project impact.
3.4.7	Uncle Bob's Storage: 314-316 Ainsley Dr	Storage Facility	Petroleum Contamination	No acquisition or adjacent excavation. Site is at a lower elevation and across the railroad tracks from the closest roadway reconstruction. Lower probability of project impact.
3.4.8	Milton CAT: 336 Ainsley Dr	Automobile Related, USTs	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	No acquisition or adjacent excavation. Site is at a lower elevation and across the railroad tracks from the closest roadway reconstruction. Lower probability of project impact.
3.4.9	Viking Mechanical Systems/Rid O Vit: 1500 Jamesville Ave	Warehouse	Chemical/Solvent Contamination, Petroleum Contamination	No acquisition or adjacent excavation. Site is at a lower elevation and across the railroad tracks from the closest roadway reconstruction. Lower probability of project impact.
3.4.10	Syracuse University - Hawkins Building: 1600 Jamesville Ave	Warehouse, USTs	Petroleum Contamination, Abandoned USTs	No acquisition or adjacent excavation. Site is at a lower elevation and across the railroad tracks from the closest roadway reconstruction. Lower probability of project impact.

#### Notes:

2) Bold in the table above highlights the sites with a higher probability of project impact.

<sup>1)</sup> The table above refers to the sites identified within the Hazardous Waste/Contaminated Materials Screening Assessment Report dated February 2020.

Non-Standard Feature Justifications a	and Design	Criteria	<b>Tables</b>
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Non-Standard and Non-Conforming Features Recommended to be Retained

# Non-Standard Features to be Retained

The Non-Standard Features recommended to be retained under PIN 3501.91 are listed in Table 1, followed by the Non-Standard Feature Justification forms.

Table 1 Non-Standard Features Recommended to be Retained

Location	Design Element	Design Criteria	Proposed Design	NSF Justification Form
Northbound I-81 (at south interchange)	HSSD	730 ft.	679/524 ft.	350191_NSFJ-01
Southbound I-81 (at south interchange)	HSSD	730 ft.	542/703 ft.	350191_NSFJ-02
Northbound I-81 to northbound BL 81 connector roadway	Grade	4% max.	6.1%	350191_NSFJ-03
Interstate Ramp, Southbound BL-81 to new Northbound I-81	HSSD	305 ft.	236 ft.	350191_NSFJ-04
Northbound and southbound I-81, Route 5/92 to Kinne Rd.	Left Shoulder Width	10 ft.(3-lane) 4 ft.(2-lane)	5 ft. 2.5 ft.	350191_NSFJ-05
Northbound and southbound I-81, at Route 5/92 bridge area	Right Shoulder Width	10 ft.	2.5 ft.	350191_NSFJ-06
Southbound I-81 at Interchange 4	Horizontal Curve	1,815 ft.	1,235 ft.	350191_NSFJ-07

#### Notes:

- 1) HSSD = Horizontal Stopping Sight Distance
- 2) Refer to Design Criteria Tables.
- 3) Refer to the following pages for Non-Standard Feature Justification Forms.

Justification Number 350191\_NSFJ-01



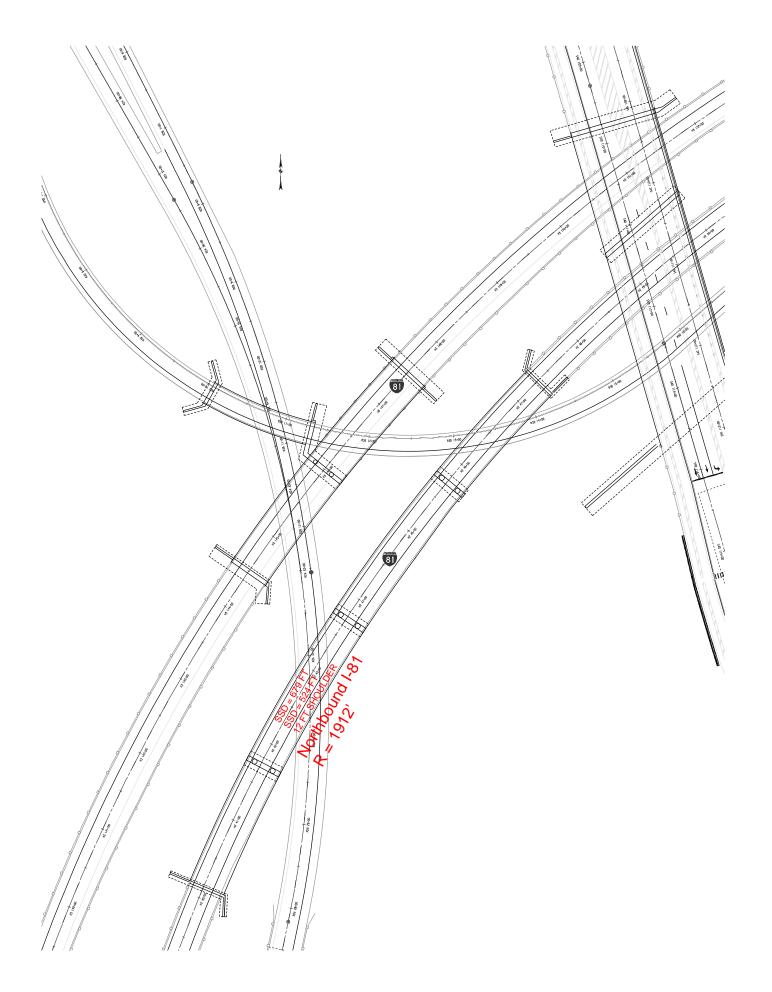
# Exhibit 2-15

STATE OF STREET OF STREET	ment of ortation	Nonstandard Feature Justification  Rev. 04/24/17			
PIN: 3501.6	Route No. and Name: I-81 Northbound at South Interchange - Communitiy Grid Alternative				
Project Type: Reconstruction		National Network/Qualifying Highway Access Highway			
Functional Class: Urban Principal Arter	rial - Interstate	Design Classification (AASHTO Class): Interstate -Urban			
<b>ADT</b> : 8700	% Trucks: 10%	NHS     Non-NHS     Terrain: Rolling			
1. Description of Nonstandard Feature					
Type of Feature: Stopping Sight Dista	nce (Horizontal)				
Location: STA H2 38+00 TO H2 ST	A 47+50 (See Attached Figure)				
Latitude and Longitude (Linear Feature)	FROM Lat: 43.002716 Long	: -76.134350 <b>TO</b> Lat: 43.005822 Long: -76.133080			
Latitude and Longitude (Point Feature) La	at: Long:				
Standard Value: 730 ft		Design Speed: 70 mph			
Existing Value: N/A, New Construction	on	Recommended Speed - Existing: 15 mph uction			
Proposed Value: 679 ft (Left Lane), 52	24 ft (Right Lane) (See note 1)	Recommended Speed - Proposed: 65 mph			
2. Accident Analysis					
Current Accident Rate <sup>1</sup> : N/A	acc/mvm acc/mev	Statewide Accident Rate: 1.08			
From N/A to		Is the Nonstandard Feature a contributing factor? Yes No			
3. Cost Estimates					
Cost to fully meet standards: \$3.2 Mil	lion (see note 2)	Cost(s) for incremental improvements: \$0.4 Million (see note 3)			
4. Mitigation					
Right side shoulder will be construed distance around the bridge barrier.	Highway guiderail to be box beam or of	ius he minimum 10 ft., on the bridge and approach to maximize sight cable to avoid sight line restrictions other than at bridge. R8-7 e any voluntary stopping on the bridge that may create a			
5. Compatibility with Adjacent Segment	s and Future Plans				
Proposed configuration is compatib	ole with adjacent segments. There are	no future plans to modify adjacent segments			
6. Other Factors					
e.g., social, economic, and environmental See Attachment (note 4).					
7. Proposed Treatment (i.e., recommen	dation)				
	ht distance with a 12 foot inside (right) ne restrictions other than at the bridges	shoulder on bridge and bridge approaches. Provide highway			

<sup>&</sup>lt;sup>1</sup> Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.

#### Nonstandard Feature Justification 350191\_NSFJ-01 (Attachment)

- 1. For the inside lane, the typical 10-foot shoulder width would provide a HSSD of 494 feet. Implementation of the incremental improvement, (widening shoulder to 12 feet), would provide an HSSD of 524 feet achieving approximately 72% of the design criteria. For the outside lane, the typical 10-foot shoulder width would provide a HSSD of 656 feet. Implementation of the incremental improvement (widening shoulder to 12 feet), would provide a HSSD of 679 feet achieving 93% of the design criteria.
- 2. The proposed design meets all other design standards except for HSSD at the bridge location (due to bridge barrier). One alternative evaluation to meet HSSD criteria was to over widen the shoulder from a standard of 10ft. to 29ft. An estimated \$ 3.2 million construction cost is based on further widening of bridge shoulder from 12 feet to 29 feet and tapering the approach and trailing shoulders. Another option to fully meet standards is described in note 4.
- 3. An incremental improvement of over widening the shoulder to 12 feet was also considered and adopted. An estimated \$0.4 million construction cost is based on widening the bridge shoulder from 10-foot standard to 12 feet and tapering the approach and trailing shoulder. See Attached Figure.
- 4. Trucks with a higher sightline, which compose of 10% of total traffic, will not be subjected to the restricted sight distance since they will be able to see over the barrier. Providing standard stopping sight distance would require a 29′ inside (right) shoulder on the bridge using the proposed curve radius. This 29′ wide shoulder may be mistaken for an additional travel lane and increase the risk of additional accidents. Flattening the radius to accommodate the required sight distance using a 12′ shoulder would create severe impacts in the southeast quadrant of the interchange. This would require acquisition of over 40 acres of property and demolition of numerous residences and high-rise buildings and was determined infeasible.



Justification Number 350191\_NSFJ-02



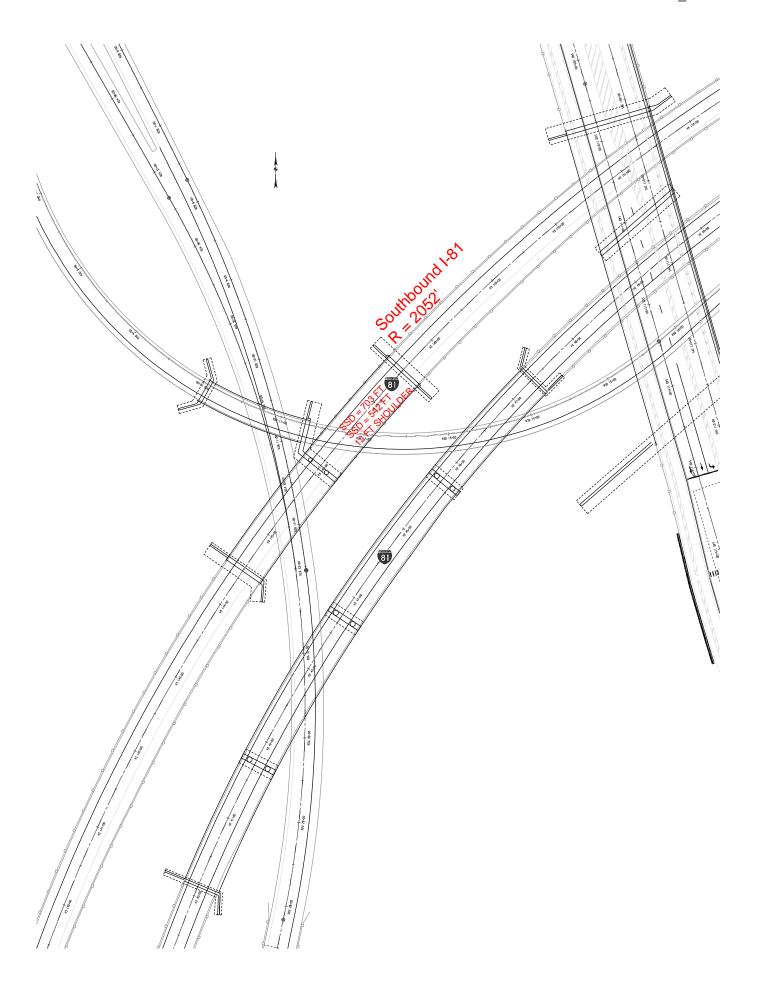
# Exhibit 2-15

NEW YORK Department Department Transpor	ent of tation	Nonstandard Feature Justification  Rev. 04/24/17			
PIN: 3501.6	Route No. and Name: I-81 southbound a	t South Interchange - Co	ommunity Grid Alternativ		
Project Type: Reconstruction		National Network/C	Qualifying Highway	Access Highway	
Functional Class: Urban Principal Arterial	- Interstate	Design Classification (AASHTO Class): Interstate -Urban			
<b>ADT</b> : 9,100	% Trucks: 8%	NHS	Terrain: Rolling		
1. Description of Nonstandard Feature					
Type of Feature: Stopping Sight Distance	e (Horizontal)				
Location: STA H3 144+00 TO STA H3	149+50 (See Attached Figure)				
Latitude and Longitude (Linear Feature) FRO	<b>M</b> Lat: 43.005863	5.133327 то	Lat: 43.007364	Long: -76.131432	
Latitude and Longitude (Point Feature) Lat:	Long:				
Standard Value: 730 ft		Design Speed: 70 mph			
Existing Value: N/A, New Construction		Recommended Speed - Exis	sting: 15 mph	uction	
Proposed Value: 542 ft (Left Lane) 703 ft	(Right Lane) (See note 1)	Recommended Speed - Pro	pposed: 65 mph		
2. Accident Analysis					
Current Accident Rate <sup>1</sup> : N/A	acc/mvm acc/mev	Statewide Accident Rate:	1.08	/mvm acc/mev	
From N/A to N	//A	Is the Nonstandard Feature	e a contributing factor? (	Yes No	
3. Cost Estimates					
Cost to fully meet standards: \$1.7 Million	n (see note 2)	Cost(s) for incremental imp	provements: \$1.5 Million	(see note 3)	
4. Mitigation					
around the bridge barrier. The addition the left lane. Highway guiderail to be b	e lane length for a non-standard ramp radius ted using a width of 12', instead of the m nal shoulder width also serves as extra s box beam or cable to avoid sight line res dge to discourage any voluntary stoppin	space for any evasive ma trictions other than at bri	aneuvering around obstidge. R8-7 signs (Emerg	ructions in	
5. Compatibility with Adjacent Segments a	nd Future Plans				
Proposed configuration is compatible	with adjacent segments. There are no fu	iture plans to modify adja	acent segments		
6. Other Factors					
e.g., social, economic, and environmental  See Attachment (note 4).					
7. Proposed Treatment (i.e., recommendat	ion)				
Provide non-standard stopping sight or restrictions other than at the bridges.	listance with a 12' inside (left) shoulder.	Provide highway guidera	ail that will not cause sig	tht line	

<sup>&</sup>lt;sup>1</sup> Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.

#### Nonstandard Feature Justification 350191\_NSFJ-02 (Attachment)

- 1. For the inside lane, the typical 4-foot shoulder width would provide a HSSD of 404 feet. Implementation of the incremental improvement, (widening shoulder to 12 feet), would provide an HSSD of 542 feet achieving approximately 74% of the design criteria. For the outside lane, the typical 4-foot shoulder width would provide a HSSD of 602 feet. Implementation of the incremental improvement (widening shoulder to 12 feet), would provide a HSSD of 703 feet achieving 96% of the design criteria.
- 2. The proposed design meets all other design standards except for HSSD at the bridge location (due to bridge barrier). One Alternative evaluation to meet HSSD criteria was to over widen the shoulder from a standard of 10 feet to 29 feet. An estimated \$1.7 million construction cost is based on further widening of bridge shoulder from 12 feet to 27 feet and tapering approach and trailing the shoulders. Another option to fully meet standards is described in note 4.
- 3. An incremental improvement of over widening the shoulder to 12 feet was also considered and adopted. An estimated \$1.5 million construction cost is based on widening the bridge shoulder from 4-foot standard to 12 feet and tapering the approach and trailing shoulders. See Attached Figure.
- 4. Trucks with a higher sightline, which compose of 8% of total traffic, will not be subjected to the restricted sight distance since they will be able to see over the barrier. Providing standard stopping sight distance would require a 27' inside (left) shoulder on the bridge using the proposed curve radius. This 27' wide shoulder may be mistaken for an additional travel lane and increase the risk of additional accidents. Flattening the radius to accommodate the required sight distance using a 12' shoulder would create severe impacts in the southeast quadrant of the interchange. This would require acquisition of over 40 acres of property and demolition of numerous residences and high-rise buildings and was determined infeasible.



Justification Number 350191\_NSFJ-04



# Exhibit 2-15 Nonstandard Feature Justification

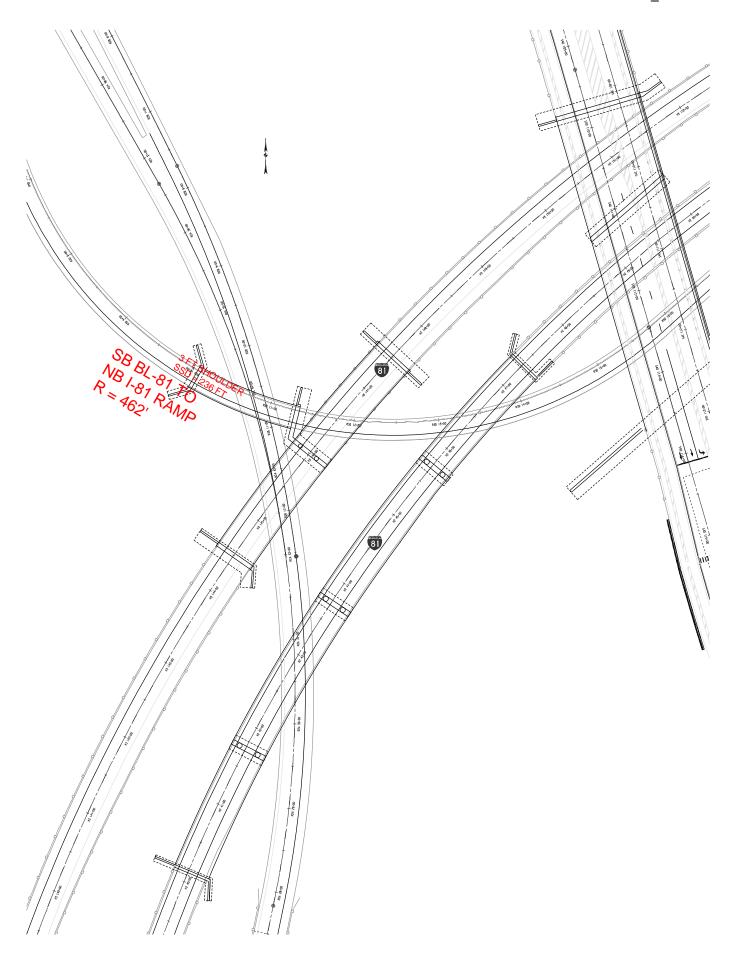
				Rev. 04/24/17	
PIN: 3501.6	Route No. and Name: BL-81 Southbound to I-81 Northbound Ramp at South Interchange-Communitiy Grid Alternative				
Project Type: Reconstruction		✓ National Network/Qualifying Highway			
Functional Class: Urban Principal Arterial - Other Freeway/Expressway		Design Classification (AASH	TO Class): Other Freewa	y - Urban	
adt: N/A	% Trucks: N/A	NHS	Terrain: Rolling		
1. Description of Nonstandard Feature					
Type of Feature: Stopping Sight Distance	e (Horizontal)				
Location: STA R3D 9+00 TO 11+45 (S	ee Attached Figure)				
Latitude and Longitude (Linear Feature) FRO	M Lat: 43.002716 Long: -76	5.134350 то	Lat: 43.005822	Long: -76.133080	
Latitude and Longitude (Point Feature) Lat:	Long:				
Standard Value: 305 ft		Design Speed: 40 mph			
Existing Value: N/A, New Construction		Recommended Speed - Exis	sting: 15 mph	uction	
Proposed Value: 236 ft (see note 1)		Recommended Speed - Pro	posed: 35 mph		
2. Accident Analysis					
Current Accident Rate <sup>1</sup> : N/A	acc/mvm acc/mev	Statewide Accident Rate:	0.19 <b>•</b> acc/n	nvm acc/mev	
From N/A to N	I/A	Is the Nonstandard Feature	a contributing factor?	Yes No	
N/A - New Construction					
3. Cost Estimates					
Cost to fully meet standards: \$1.17 Millio	on (see note 2)	Cost(s) for incremental imp	rovements: \$0.35 Million	1	
4. Mitigation					
around the bridge barrier. The addition the left lane. Highway guiderail to be be	e lane length for a non-standard ramp radius ted using a width of 8', instead of the mi nal shoulder width also serves as extra s pox beam or cable to avoid sight line res dge to discourage any voluntary stoppin	space for any evasive ma trictions other than at bri	aneuvering around obstrudge. R8-7 signs (Emerge	uctions in	
5. Compatibility with Adjacent Segments a	nd Future Plans				
Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments					
6. Other Factors					
e.g., social, economic, and environmental  See Attachment. (see note 3)					
GGG / Maddiniona. (GGG Hote G)					
7. Proposed Treatment (i.e., recommendat	ion)				
Provide 8 foot wide left side shoulder on the bridge and bridge approach to provide an incremental improvement in the resultant non-standard stopping sight distance. Provide appropriate transition to highway guiderail that will not cause sight line restrictions other than at the bridge.					

<sup>&</sup>lt;sup>1</sup> Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.

#### Non-Standard Feature Justification

HSSD - BL-81 Southbound to I-81 Northbound Ramp at South Interchange-CG Alternative 350191\_NSFJ-04
(Attachment)

- 1. For the proposed southbound BL 81 to northbound I-81 ramp, the normal 4-foot wide left shoulder width would provide a HSSD of 202 feet (Design Standard = 305 feet) for the section of the ramp that is on a bridge and adjacent to bridge barrier. Trucks with a higher sightline, will not be subjected to the restricted sight distance since they will be able to see over the barrier. Implementation of an incremental improvement (widening shoulder to 8 feet, see note 2), would provide a HSSD of 236 feet achieving approximately 77% of the design standard.
- 2. The proposed design meets all other design standards except for HSSD at the bridge location (due to the bridge barrier). One alternative evaluated to meet HSSD criteria, was to over widen the shoulder to 17.5 feet. To further widen the left shoulder from the proposed 8-foot width to a 17.5-foot width would cost an additional \$0.82 million, including tapering the approach and trailing shoulders. In addition, a 17.5-foot wide shoulder may be mistaken for an additional travel lane and increase the risk of additional accidents Another option to fully meet standards is described in note 3.
- 3. An alternative to over-widening the shoulder would be to flatten the horizontal curve radius to accommodate the required sight distance with a standard 4-foot wide shoulder. However, a flatter horizontal curve is not feasible as it would not fit without substantially changing the design of the interchange, which would inevitably require additional property acquisitions and result in other non-standard and/or non-conforming features.



Justification Number 350191\_NSFJ-05



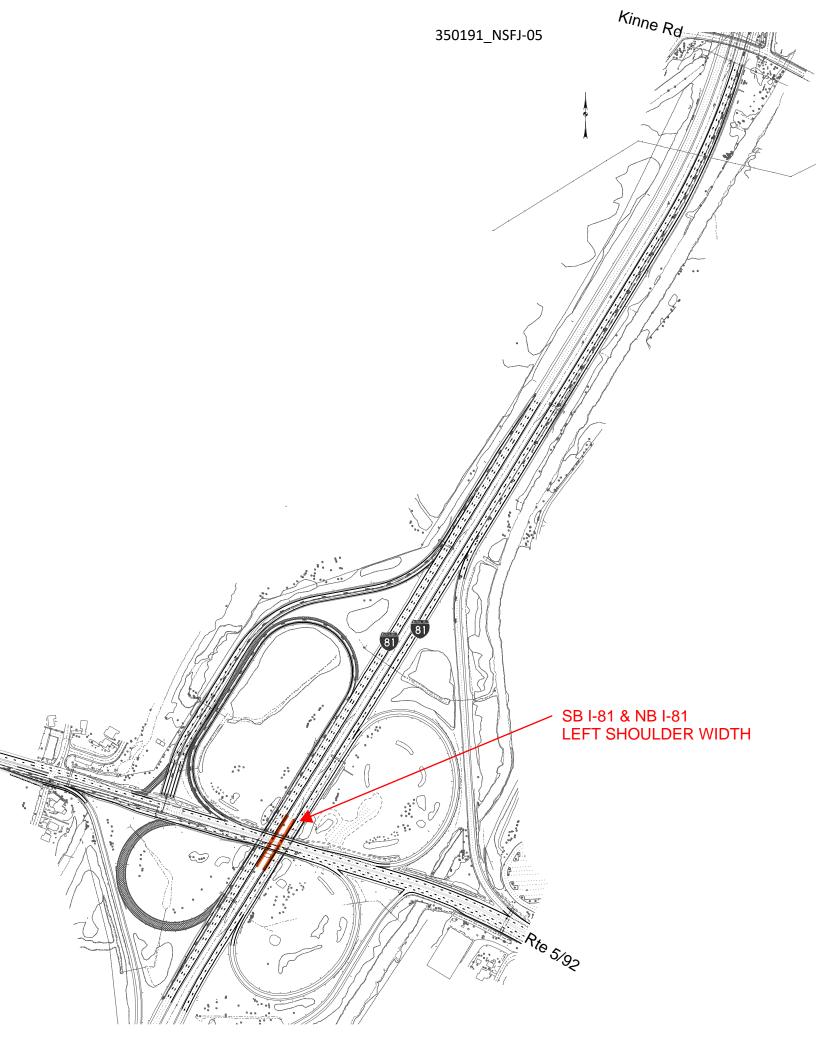
Exhibit 2-15 **Nonstandard Feature Justification** Rev. 04/24/17 Route No. and Name: I-81, Eastern Segment, Rte5 to Kinne Rd - Community Grid Alternative PIN: 3501.60 Access Highway National Network/Qualifying Highway Project Type: Reconstruction Functional Class: Urban Principal Arterial - Interstate Design Classification (AASHTO Class): Interstate - Urban ADT: NB-23890; SB-25680 % Trucks: NB-8%; SB-6% Terrain: Rolling 1. Description of Nonstandard Feature Type of Feature: Shoulder Width Location: I-81 NB STA R6C 32+50 TO R6C 37+50 and I-81 SB STA R6C 32+50 TO R6C 37+50 Latitude and Longitude (Linear Feature) FROM Lat: 43.056156° Long: -76.153300° TO Lat: 43.061359° Long: -76.156533° Latitude and Longitude (Point Feature) Lat: Long: Standard Value: 10 ft. Left (3 lane); 4 ft. Left (2 lane) Design Speed: 70 mph Recommended Speed - Existing: 65 mph Existing Value: NB 2.5 ft (2 lane); SB 5 ft. (3 lane) Recommended Speed - Proposed: 65 mph Proposed Value: NB 2.5 ft (2 lane); SB 5 ft. (3 lane) 2. Accident Analysis Current Accident Rate<sup>1</sup>: 1.60 (note 3) acc/mvm acc/mev Statewide Accident Rate: 1.14 acc/mvm acc/mev O No From Sep. 01, 2014 to Aug. 31, 2017 Is the Nonstandard Feature a contributing factor? Yes Anticipated accident rates, severity, and costs: See note 3. 3. Cost Estimates Cost to fully meet standards: 2.58 M (Note 2) Cost(s) for incremental improvements: N/A (Note 2) 4. Mitigation e.g., increased superelevation and speed change lane length for a non-standard ramp radius The existing left side shoulder widths across the existing bridges over Route 5/92 would be retained. The existing bridges are in good condition and would not otherwise require modification for this project. Widening the bridges to meet the shoulder width design standard would be implemented at a future date when the bridges are in need of rehabilitation or replacement. 5. Compatibility with Adjacent Segments and Future Plans Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments 6. Other Factors e.g., social, economic, and environmental None. 7. Proposed Treatment (i.e., recommendation) The existing non-standard left shoulder width in the Rte 5/92 bridge area, for both directions of freeway, will be retained. (See note 1)

Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.

#### Non-Standard Feature Justification

Left Shoulder Width – New I-81 Eastern Segment at Interchange 3 area - CG Alternative 350191\_NSFJ-05 (Attachment)

- 1. Where re-designated I-81 crosses over Route 5/92, the left-side shoulders on the existing bridges in both directions, and their approaches (a distance of approximately 500 feet), are non-standard. The existing non-standard left shoulder width of about 2.5 feet (NB) and 5 feet (SB) are less than the 4-foot and 10-foot design standard, respectively. In addition, portions of re-designated I-81, between Route 5/92 and Kinne Road, a distance of approximately 4950 feet, include sections of freeway having 3 or more travel lanes. In the northbound direction, between the northbound on-ramp gore and Kinne Road, the northbound freeway section consists of 3 travel lanes plus an auxiliary lane. In the southbound direction, the entire section from just south of the Route 5/92 bridge to Kinne Road consists of 3-travel lanes. The existing left side shoulders on the highway segments are about 5-6 feet wide and will be widened to 10 feet as part of the project, but the existing shoulders on the bridges, will be retained. The existing bridges are in good condition and would not otherwise require modification for this project. Widening the bridges to meet the shoulder width design standard would be implemented at a future date when the bridges are in need of rehabilitation or replacement.
- 2. The cost estimate is based on widening the left side bridge shoulders to fully meet the design standard of 4 feet (northbound) or 10 feet (southbound) and replacement of 50 % of the bridge deck. The other 50% of the bridge deck is included in the "Right Side" shoulder estimate see NSF Justification form A-3-3-03b. The cost estimate also includes widening the approach shoulders as needed to transition to the adjacent highway segments.
- 3. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 5 crashes occurred along NB I-481, of which 1 crash was identified to be potentially related to the existing non-standard shoulder width feature. The number of crashes potentially related to the existing non-standard feature equates to 20% of total crashes, and a crash rate of 0.28 acc/mvm). Along the SB I-481 segment of this highway, a total of 33 crashes occurred during the analysis period, of which 2 crashes were identified to be potentially related to the existing non-standard shoulder width feature. The number of crashes potentially related to the existing non-standard feature equates to 6.1% of total crashes, and a crash rate of 0.35 acc/mvm).



Justification Number 350191\_NSFJ-06



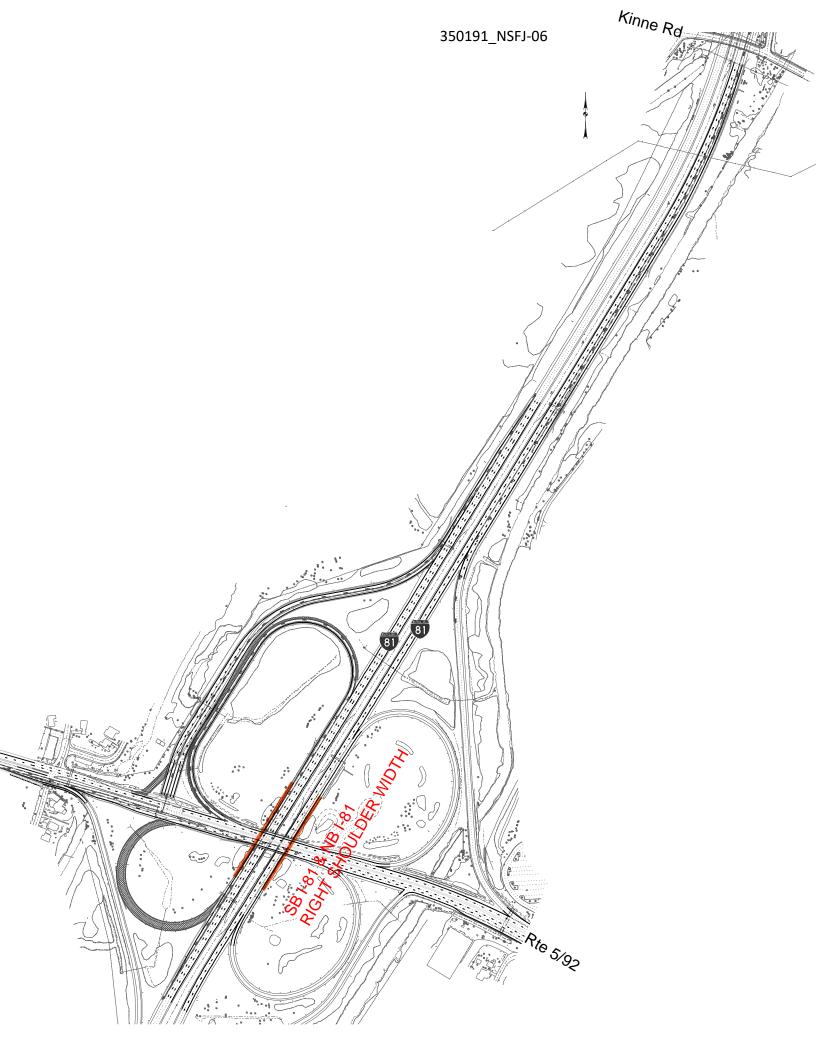
Exhibit 2-15 **Nonstandard Feature Justification** Rev. 04/24/17 PIN: 3501.60 Route No. and Name: I-81, Eastern Segment at Rte5/92- Community Grid Alternative National Network/Qualifying Highway Access Highway Project Type: Reconstruction Functional Class: Urban Principal Arterial - Interstate Design Classification (AASHTO Class): Interstate - Urban ADT: NB-16220; SB-26670 % Trucks: NB-8%; SB-6% Terrain: Rolling 1. Description of Nonstandard Feature Type of Feature: Shoulder Width Location: I-81 NB STA R6C 32+50 TO R6C 37+50; I-81 SB STA R6C 32+50 TO R6C 37+50 Latitude and Longitude (Linear Feature) FROM Lat: 43.056156° Long: -76.153300° TO Lat: 43.061359° Long: -76.156533° Latitude and Longitude (Point Feature) Lat: Long: Standard Value: 10 ft. Right Design Speed: 70 mph Existing Value: Recommended Speed - Existing: 65 mph 2.5 ft. Recommended Speed - Proposed: 65 mph Proposed Value: 2.5 ft. 2. Accident Analysis Current Accident Rate<sup>1</sup>: 3.56 (note 3) acc/mvm acc/mev Statewide Accident Rate: 1.12 acc/mvm acc/mev O No From Sep. 01, 2014 to Aug. 31, 2017 Is the Nonstandard Feature a contributing factor? Yes Anticipated accident rates, severity, and costs: See note 3. 3. Cost Estimates Cost to fully meet standards: 3.41 M (Note 2) Cost(s) for incremental improvements: N/A (see Note 3) 4. Mitigation e.g., increased superelevation and speed change lane length for a non-standard ramp radius The existing right side shoulder widths across the existing bridges over Route 5/92 would be retained. The existing bridges are in good condition and would not otherwise require modification for this project. Widening the bridges to meet the shoulder width design standard would be implemented at a future date when the bridges are in need of rehabilitation or replacement. 5. Compatibility with Adjacent Segments and Future Plans Proposed configuration is compatible with adjacent segments. There are no future plans to modify adjacent segments 6. Other Factors e.g., social, economic, and environmental None. 7. Proposed Treatment (i.e., recommendation) The existing non-standard right shoulder width in the Rte 5/92 bridge area, for both directions of freeway, will be retained. (See note 1)

Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.

#### Non-Standard Feature Justification

Right Shoulder Width – New I-81 Eastern Segment at Interchange 3 Area - CG Alternative 350191\_NSFJ-06 (Attachment)

- 1. Where re-designated I-81 crosses over Route 5/92, the right-side shoulders on the existing bridges in both directions, and their approaches (a distance of approximately 500 feet), are non-standard. The existing non-standard right shoulder width of about 2.5 feet is less than the 10-foot design standard. The existing bridges are in good condition and would not otherwise require modification for this project. Widening the bridges to meet the shoulder width design standard would be implemented at a future date when the bridges are in need of rehabilitation or replacement.
- 2. The cost estimate is based on widening the right-side bridge shoulders to fully meet the design standard of 10 feet (both northbound and southbound) and replacement of 50 % of the bridge deck. The other 50% of the bridge deck is included in the "Left Side" shoulder estimate see NSF Justification form A-3-3-03a. The cost estimate also includes widening the approach shoulders as needed to transition to the adjacent highway segments.
- 3. During the three-year analysis period from September 1, 2014 through August 31, 2017, a total of 5 crashes occurred along NB I-481, of which 1 crash was identified to be potentially related to the existing non-standard shoulder width feature. The number of crashes potentially related to the existing non-standard feature equates to 20% of total crashes, and a crash rate of 0.28 acc/mvm). Along the SB I-481 segment of this highway, a total of 33 crashes occurred during the analysis period, of which 2 crashes were identified to be potentially related to the existing non-standard shoulder width feature. The number of crashes potentially related to the existing non-standard feature equates to 6.1% of total crashes, and a crash rate of 0.35 acc/mvm).





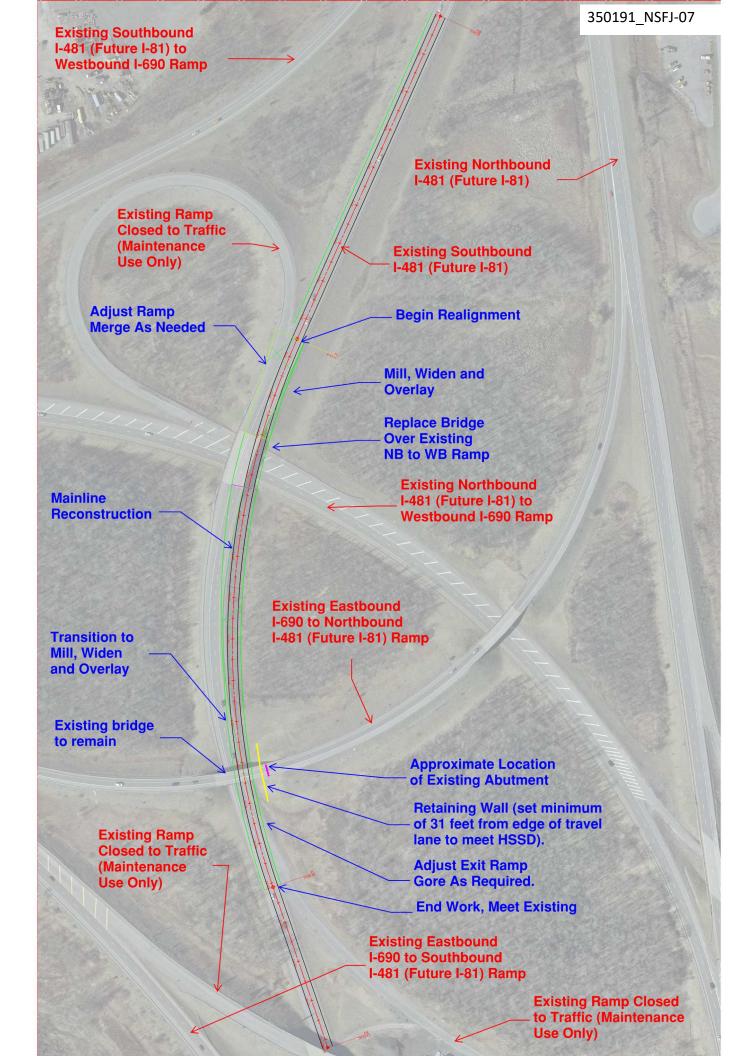
NEW YORK Departm			chibit 2-15	
Transpor	tation	Nonstandard	Feature Justification	Pour 04/24/47
PIN: 3501.60	Route No. and Name: Southbound I-481	(Future I-81) at Intercha	nge 4 - Community Grid Altern	Rev. 04/24/17 ative
Project Type: Reconstruction	1	✓ National Network/0	Qualifying Highway	ess Highway
Functional Class: Urban Principal Arterial	- Interstate	Design Classification (AASH	HTO Class): Interstate -Urban	
ADT: 23,104 (southbound only)	% Trucks: 6%	NHS	Terrain: Rolling	
Description of Nonstandard Feature				
Type of Feature: Horizontal Curve Radiu	IS			
Location: RM 481I 33012159 TO RM	481I 33012063 (See Attached Figure)			
Latitude and Longitude (Linear Feature) FRC	<b>DM</b> Lat: 43.053576 Long: -76	6.054176 <b>TO</b>	Lat: 43.057175 Lo	ong: -76.053809
Latitude and Longitude (Point Feature) Lat:	Long:			
Standard Value: 1815 ft @ 8% superele	vation	Design Speed: 70 mph		
Existing Value: 1235 ft		Recommended Speed - Exi	sting: 55 mph	
Proposed Value: 1235 ft @ existing supe	erelevation	Recommended Speed - Pro	pposed: 55 mph	
2. Accident Analysis				
Current Accident Rate <sup>1</sup> : 1.26 (	acc/mvm acc/mev	Statewide Accident Rate:	1.14	acc/mev
From 7/1/2016 to 6	6/30/2019	Is the Nonstandard Feature	e a contributing factor? • Yes	○ No
3. Cost Estimates				
	on (see note 2)	Cost(s) for incremental imp	arguments: N/A (ago noto 3)	
4. Mitigation	on (see note 2)	Cost(s) for incremental imp	provements: N/A (see note 3).	
e.g., increased superelevation and speed chang	ge lane length for a non-standard ramp radius			
Curve warning signs will be placed in	advance of the curve.			
5. Compatibility with Adjacent Segments a	nd Future Plans			
No future plans for adjacent segment	s of this ramp.			
6. Other Factors e.g., social, economic, and environmental				
Providing a standard curve would req	uire approximately 1,400 LF of mainline estimated safety benefit. See Notes 2 an		s a retaining wall (see attached	figure). The cost of
7. Proposed Treatment (i.e., recommendate	tion)			
Propose retention of existing non-sta	ndard curve radii, add curve warning sigr	ns and continue NYSDO	T monitoring.	

<sup>1</sup> Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.

# Non-Standard Feature Justification

Horizontal Curve – I-481 (Future I-81) at existing I-481 Interchange 4 - CG Alternative 350191\_NSFJ-07 (Attachment)

- 1. The existing crash rate is slightly higher than the statewide average rate at this location. For the 3-year period, there were a total of 10 crashes, 6 of which are potentially related to the non-standard horizontal curve along southbound I-481. A cluster of crashes occurred on the horizontal curve in the approximate center of the existing I-481 Interchange 4. The majority of these crashes are fixed object crashes resulting from a loss of control in adverse weather conditions. A pavement friction evaluation was conducted in accordance with the Department's Comprehensive Pavement Design Manual. The measured FN(40) values were between 37.3 and 59.3, which are above 32 (the friction value utilized in the stopping sight distance criteria for wet pavements). With measured friction values higher than 32, it appears skid resistance is not contributing to the crash history at this location.
- Modification of the horizontal curve to meet current design standards would require approximately 1,400
  LF of mainline reconstruction as well as a retaining wall (see attached figure). The cost of the
  reconstruction would exceed the estimated safety benefit.
- 3. An incremental improvement was evaluated, which involved adjusting the superelevation to the maximum 8%, which would increase the allowable speed to approximately 60 mph vs the 70 mph Design Speed. However, the existing mainline passes under an existing ramp bridge with minimum vertical clearance, so it is not possible to adjust the superelevation without either replacing the existing bridge or introducing a non-standard vertical clearance. In addition, adjusting the superelevation would also affect the overpass bridge on the north end of the curve. The shim depth required to obtain an 8% superelevation would likely cause the load carrying capacity of the bridge to be exceeded, resulting in the need to replace or heavily modify a second bridge. Both of the potentially impacted existing bridges are in good condition with good remaining service life.



# Non-Conforming Features to be Retained

The Non-Conforming Features recommended to be retained under PIN 3501.91 are listed in Table 1, followed by the Non-Standard Feature Justification.

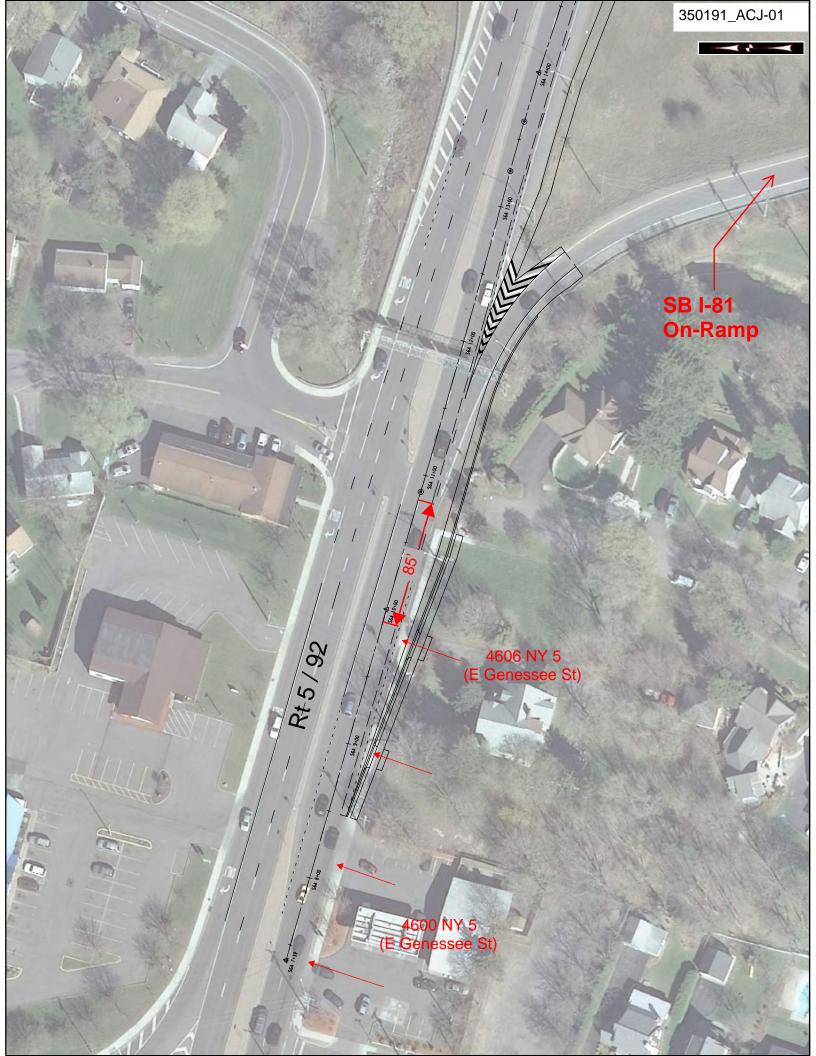
Table 2 Non-Conforming Freeway Features Recommended to be Retained

Location Description	Design Element	Recommended Design Standard (1)	Proposed Design Standard (2)	Justification
Ramp – SB I-81 (Existing I-481) to RTE 5, R6A STA 28+49 to 32+97	Broken Back Curve	1500 ft	448 ft.	Note 1
EB Rt 5/92 to SB I-81 Ramp - Proximity to Driveways at 4600 - 4606 NY-5.	Control of Access	100 ft.	0 ft.	Note 2, and Exhibit 350191-ACJ-01

Justification for retaining Non-Conforming Feature:

- 1. This broken back curve was necessary for the added left turn from the off-ramp to EB Route 5.
- 2. Closing these driveways would impact one residence and one business. Refer to the Access Control Justification form, Exhibit 350191-ACJ-01, on the following page.

Exhibit 350191_ACJ-01 Access Control Justification							
PIN:	3501.6		Route	No. & Name:	l t		Rt 5/92 to SB I-81 Ramp - Proximity iveway
Project Type:	Reconstruction		Desig	n Classificatio	n:	nters	state Ramp
ADT (2050)	3705		Desig	n Speed	3	30 m	ph
DHV (2050)	389		% Tru	ıcks:	1	1.6%	
Description of N	Nonstandard Fea	ature					
. , , ,	Feature (e.g.	, Control of Access					
horizontal curve Location:	e radius):	Several driveways from Attached Sketch).	n 4600	- 4606 NY-5 (	(See	(	Community Grid Alternative
Standard Value	<b>)</b> :	100 ft	C	Design Speed		3	0 mph
Existing Value:		85 ft					
Proposed Value	e:	0 ft					
Accident Analys	sis						
Current Accident	t Rate:	0.63 acc/mvm	State	wide Accident	Rate:		0.15 acc/mvm
Is the NSF a contributing identified accidentation Choose YES of the NSF account of the N	ents?	re to YES  NO  NO		NO 🛚			
If YES, describe how contributes to acc							
Cost Estimates							
Cost to Fully	Meet Standards	:	None				
Cost(s) For Ir	ncremental Impr	ovements:	No inc	cremental imp	roveme	ent.	
4. Measures to Mi		tial Adverse Effects of the I	NSF (e	e.g., curve war	ning sig	gns f	or a non-standard horizontal curve;
the on-ramp to improve	e traffic operatio	ns, which results in two re	esidenti	ial driveways l	being v	vithir	tion extends the auxiliary lane for n the auxiliary lane. The ramp is an rong way movement on the ramp.
5. Compatibility wi	th Adjacent Seg	ments and Future Plans					
These are existing driv	eways in an urb	oan area which are consist	tent wit	th adjacent se	gment	s an	d future plans.
6. Social, Economi	c & Environmen	tal factors that weigh in the	e decisi	on to retain or	propos	se th	e NSF
These are existing driveways to one residence, and a gas station with a small parking area used by the business. Closing the driveways would eliminate access to the gas station and the residence, which would have a negative impact on the business and property.							
7. Recommendation	on						
Retain existing non-star	ndard control of	access to/ from the existing	g drive	ways.			



# Design Criteria Tables

#### TABLE 1

	DESIGN CRITERIA – NEW I-81, SOUTH INTERCHANGE TO I-690								
PII	N:	3501.91		NHS (Y/N):	Yes				
Ro	ute No. & Name:	Re-designated I-81 (Including former I- 481)		Functional Classification:	Urban Principal Arterial – Other Freeway/Expressway				
Pro	oject Type:	Reconstruction		Design Classification:	Freeway/Expressway				
% ′	Trucks:	6%		Terrain:	Rolling				
AD	OT (2050):	56,800		Truck Access/Qualifying:	Qualifying Highway				
	DESIGN ELEMENT	STANDARD CRITERIA	EXISTING CONDITION	PROPOSED CONDITION	REFERENCE				
1	Design Speed (Min.)	70 mph (1)	Posted 65 mph (2)	70 mph	HDM § 2.7.1.1.A				
2	Travel Lane Width (Min.)	12 ft.	12 ft.	12 ft.	HDM § 2.7.1.1.B				
3	Shoulder Width (Min.) Right Left (2-lanes per direction) Left (3-lanes per direction)	10 ft. 4 ft. 10 ft.	2.5 ft.* (3) 2.5 ft.* (3) 5 ft. * (3)	2.5 ft.* (3, 4) 2.5 ft.* (3, 4) 5 ft.* (3, 4, 5)	HDM § 2.7.1.1.C Exhibit 2-2				
4	Grade (Max.)	4%	5.0%*	4%	HDM § 2.7.1.1.G Exhibit 2-2,				
5	Horizontal Curve Radius (Min. Radius)	1815 ft. @ 8%	1572 ft.*	1912 ft.	HDM § 2.7.1.1.D Exhibit 2-2				
6	Superelevation	8%	4.1% *	8%	HDM § 2.7.1.1.E				
7	Stopping Sight Distance (Min.)	730 ft.	389 ft.*	524 ft. * (6)	HDM § 2.7.1.1.F Exhibit 2-2				
8	Vertical Clearance	16 ft. Min. (7) 16.5 ft. Desired	16 ft. (Min.)	16.5 ft. Min. (7)	HDM § 2.7.1.1.I / NYSDOT Brg. Man. § 2.3.1, Table 2-2				
9	Cross Slope (Pavement) (Min.) / (Max.)	1.5% min, 2.5% max	1.5% / 2.0%	1.5% min, 2.5% max	HDM § 2.7.1.1.H				
10	Design Loading Structural Capacity	NYSDOT Bridge Manual, Section 2.5	H20	NYSDOT Bridge Manual, Section 2.5	NYSDOT Bridge Manual, Section 2.5				

#### \* Nonstandard feature

- 1. The Regional Traffic Engineer has concurred that the use of a Design Speed of 70 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.
- Posted 55 mph between southern project limit and Rock Cut Road interchange on existing I-481, then posted 65 mph between Rock Cut Road interchange to northern project limit.
- All shoulders meet the design standard except for the existing left and right shoulders on both the existing NB and SB I-481 bridge over Route 5/92 (see Non-Standard Feature Justification Forms).
- 4. On inside of horizontal curves, the proposed shoulder width varies to 12 feet maximum to incrementally improve Horizontal Stopping Sight Distance (HSSD) or meet HSSD criteria.
- 5. There is no qualifying 3-lane section in the south interchange area or in the along the proposed I-81 corridor, between the I-690 interchange and the I-90 interchange (the 3-lane sections between I-690 and I-90 are due to auxiliary lanes which are less than 1-mile long). There are qualifying 3-lane segments in the along proposed I-81, between the Route 5/92 interchange and Kinne Road, where 10-foot median side shoulders are provided in accordance with the design criteria, except at the northbound and southbound future I-81 bridges over Route 5/92 (See Non-Standard Feature Justification Forms).
- 6. Proposed Horizontal Stopping Sight Distance is non-standard along two curves in the south interchange area (See Non-Standard Feature Justification Forms).

  All other locations meet design criteria of 730 feet minimum.
- 7. New I-81 is the designated 16-ft route. The minimum vertical clearance for sign structures and pedestrian bridges shall be 1-ft greater.
- 8. The 70 mph design speed applies to the eastbound I-690/southbound I-81 merge.

# TABLE 2

	DESIGN C	RITERIA FOR BL 81, SOU	TH INTERCHAN	NGE TO CALTHROP AVI	E.
PI		3501.91		NHS (Y/N):	Yes
Ro	ute No. & Name:	Business Loop 81 (Former I-81), south interchange to Calthrop Ave.		Functional Classification:	Urban Principal Arterial - Other Freeway/Expressway
Pro	oject Type:	Reconstruction		Design Classification:	Freeway/Expressway
% '	Trucks:	5%		Terrain:	Rolling
ΑĽ	OT (2050):	39,300		Truck Access/Qualifying:	Qualifying Highway
	DESIGN ELEMENT	STANDARD CRITERIA	EXISTING CONDITION	PROPOSED CONDITION	REFERENCE
1	Design Speed (Min.)	60 mph (1,5)	Posted 55 mph	60 mph (1,5)	HDM § 2.7.1.1.A
2	Travel Lane Width (Min.)	12 ft.	12 ft.	12 ft.	HDM § 2.7.1.1.B
3	Shoulder Width (Min.) Right Left (2-lanes per direction) Left (3-lanes per direction)	10 ft. 4 ft. 10 ft.	2.1 ft.* n/a 2.8 ft. *	10 ft. 4 ft. N/A (4)	HDM § 2.7.1.1.C Exhibit 2-2
4	Grade (Max.)	4%	4%	4%	HDM § 2.7.1.1.G Exhibit 2-2
5	Horizontal Curve Radius (Min. Radius)	1200 ft. @ 8%	1400 ft.	>1333 ft.	HDM § 2.7.1.1.D Exhibit 2-2
6	Superelevation	8%	7.8%	8%	HDM § 2.7.1.1.E
7	Stopping Sight Distance (Min.)	570 ft.	>570	>570 ft.	HDM § 2.7.1.1.F Exhibit 2-2
8	Vertical Clearance	14 ft. Min. (2, 3) 14.5 ft. Desired	14 ft. Min.	16.5 ft. Min. (2, 3)	HDM § 2.7.1.1.I / NYSDOT Brg. Man. § 2.3.1, Table 2-2
9	Cross Slope (Pavement) (Min.) / (Max.)	1.5% min, 2.5% max	1.5% / 2.0%	1.5% min, 2.5% max	HDM § 2.7.1.1.H
10	Design Loading Structural Capacity	NYSDOT Bridge Manual, Section 2.5	HS-20	NYSDOT Bridge Manual, Section 2.5	NYSDOT Bridge Manual, Section 2.5

#### \* Nonstandard feature

- 1. The Regional Traffic Engineer has concurred that the use of a Design Speed of 60 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.
- 2. While the new I-81 is the designated 16-ft route, a minimum vertical clearance of 16.5 feet is to be provided along the section of BL 81 from the south interchange to the Van Buren St/BL 81 intersection, including along the ramps connecting I-81 and BL 81.
- 3. The minimum vertical clearance for sign structures and pedestrian bridges shall be 1ft greater.
- 4. The only location with 3 or more lanes is at the tie in location near Calthrop Ave. and is less than 800 feet long. This is considered a transitional area where the new work is meeting the existing 3 lane freeway section, therefore the 10 ft. left side shoulder criteria does not apply to this section.

# TABLE 3

	DESIGN CRITERIA	A FOR DIAGONAL RAMPS			
PIN	<b>N</b> :	3501.91		NHS (Y/N):	Yes
Roi	ute No. & Name:	Freeway/Expressway Direct Connector Roadways (1)		Functional Classification:	Urban Principal Arterial – Interstate/Freeway
Pro	ject Type:	Reconstruction	1	Design Classification:	Freeway/Expressway (2)
% ]	Trucks:	Varies		Terrain:	Rolling
AD	Т (2050):	Varies		Truck Access/Qualifying:	Qualifying Highway
	DESIGN ELEMENT	STANDARD CRITERIA	EXISTING CONDITION	PROPOSED CONDITION	REFERENCE
1	Design Speed (Min.)	60 mph min.	N/A	60 mph min (3)	HDM § 2.7.1.1.A
2	Travel Lane Width (Min.)	12 ft. min	N/A	12 ft.	HDM § 2.7.1.3.B
3	Shoulder Width (Min.) Right Left	10 ft. 4 ft.	10 ft. 6 ft.	10 ft. 4 ft.	HDM § 2.7.1.3.C Exhibit 2-2
4	Grade (Max.)	4%	4%	6.1%* (4)	HDM § 2.7.1.3.G Exhibit 2-10a
5	Horizontal Curve Radius (Min. Radius)	1200 ft. @ 8%	1400 ft.	>1342 ft.	HDM § 2.7.1.3.D Exhibit 2-10a
6	Superelevation	8% max	7.8%	8% max	HDM § 2.7.1.3.E
7	Stopping Sight Distance (Min.)	570 ft.	>570	>570 ft.	HDM § 2.7.1.3.F Exhibit 2-10a
8	Vertical Clearance	14 ft. Min. (5, 6) 14.5 ft. Desired	14 ft. Min.	16.5 ft. Min. (5, 6)	HDM § 2.7.1.3.I / NYSDOT Brg. Man. § 2.3.1 Table 2-2
9	Cross Slope (Pavement) (Min.) / (Max.)	1.5% min, 2.5% max	1.5% / 2.0%	1.5% min, 2.5% max	HDM § 2.7.1.3.H
10	Design Loading Structural Capacity	NYSDOT Bridge Manual, Section 2.5	HS-20	NYSDOT Bridge Manual, Section 2.5	NYSDOT Bridge Manual, Section 2.5

#### \* Nonstandard feature

#### Note

- 1. Table applies to the NB I-81 to NB BL 81 connector roadway (R2A) and the SB BL 81 to SB I-81 connector roadway (R3A).
- 2. These ramps act as high speed merge/diverge lanes between two freeways and require a 60 mph design speed in accordance with freeway mainline standards.
- 3. The Regional Traffic Engineer has concurred that the use of a Design Speed of 60 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.
- 4. The SB BL 81 to SB I-81 connector roadway (R3A) meets design criteria. The NB I-81 to NB BL 81 connector roadway (R2A) has a 6.1 % downgrade. See Non-Standard Feature Justification.
- 5. While the new I-81 is the designated 16-ft route, a minimum vertical clearance of 16.5 feet is to be provided along the section of BL 81 from the south interchange to the Van Buren St/BL 81 intersection, including along the connector roadway and ramps connecting I-81 and BL 81.
- 6. The minimum vertical clearance for sign structures and pedestrian bridges shall be 1-ft greater.

### TABLE 4

	DESIGN CRITERIA	A FOR DIRECT CONNECTOR	RAMPS		
PIN	<b>1:</b>	3501.91		NHS (Y/N):	Yes
Rou	tte No. & Name:	Freeway/Expressway Direct Connector Roadways (1)		Functional Classification:	Urban Principal Arterial – Interstate/Freeway
Pro	ject Type:	Reconstruction		Design Classification:	Ramp – Direct Connector Freeway/Expressway (2)
% Т	'rucks:	Varies		Terrain:	Rolling
AD'	Г (2050):	Varies		Truck Access/Qualifying:	Qualifying Highway
	DESIGN ELEMENT	STANDARD CRITERIA	EXISTING CONDITION	PROPOSED CONDITION	REFERENCE
1	Design Speed (Min.)	40 mph	40 mph	40 mph (3)	HDM § 2.7.5.3.A
2	Travel Lane Width (Min.)	15 ft. R=300' to 599'	varies	15 ft.	HDM § 2.7.5.3.B Exhibit 2.9
3	Shoulder Width (Min.) Right Left	6 ft. 4 ft.	Varies*	6 ft. 4 ft.	HDM § 2.7.5.3.C Exhibit 2-10a, Note 2
4	Grade (Max.)	6% max.	< 6%	4.1%	HDM § 2.7.5.3.G Exhibit 2-10a
5	Horizontal Curve Radius (Min. Radius)	444 ft. @ 8%	> 444 ft.	462 ft. @ 8% max	HDM § 2.7.5.3.D Exhibit 2-10a
6	Superelevation	8%	8% Max.	8%	HDM § 2.7.5.3.E
7	Stopping Sight Distance (Min.)	305 ft.	>305 ft.	>305 ft.	HDM § 2.7.5.3.F Exhibit 2-10a
8	Vertical Clearance	16 ft. Min. (5, 6) 16.5 ft. Desired	16 ft. Min.	16.5 ft. Min. (5, 6)	HDM § 2.7.5.3.I / NYSDOT Brg. Man. § 2.3.1 Table 2-2
9	Cross Slope (Pavement) (Min.) / (Max.)	1.5% min, 2.5% max	1.5% / 2.0%	1.5% min, 2.5% max	HDM § 2.7.5.3.H
10	Design Loading Structural Capacity	NYSDOT Bridge Manual, Section 2.5	HS-20	NYSDOT Bridge Manual, Section 2.5	NYSDOT Bridge Manual, Section 2.5

#### \* Nonstandard feature

#### Note

- 1. Table applies to the SB BL 81 to NB I-81 Direct Connector Ramp (R3D).
- 2. Ramps to be designed with provision for passing a WB-67 stalled vehicle (Case IIC).
- 3. The Regional Traffic Engineer has concurred that the use of a Design Speed of 40 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.
- 4. Lane width based on deducting right and left shoulder widths from the Exhibit 2-9 Traveled Way Width, Case IIC, and applying the minimum Case I lane width. Per Exhibit 2-9, where the stabilized shoulder width on one side is 4 ft. or greater, a 12-foot lane width may be used on tangents (radius greater than or equal to 600 ft.)
- 5. While the new I-81 is the designated 16-ft route, a minimum vertical clearance of 16.5 feet is to be provided along the section of BL 81 from the south interchange to the Van Buren St/BL 81 intersection, including along the connector roadway and ramps connecting I-81 and BL 81.
- 6. The minimum vertical clearance for sign structures and pedestrian bridges shall be 1-ft greater.

### TABLE 5

	DESIGN CRITERIA	A FOR DIAGONAL RAMPS			
PIN	J:	3501.91		NHS (Y/N):	Yes
Rot	ite No. & Name:	Freeway/Expressway Diagonal Ramps (1)		Functional Classification:	Urban Principal Arterial – Interstate/Freeway (2)
Pro	ject Type:	Reconstruction		Design Classification:	Ramp (Diagonal)
% ]	Trucks:	Varies		Terrain:	Rolling
AD	Т (2050):	Varies		Truck Access/Qualifying:	Qualifying Highway
	DESIGN ELEMENT	STANDARD CRITERIA	EXISTING CONDITION	PROPOSED CONDITION	REFERENCE
1	Design Speed (Min.)	40 mph (3)	40 mph	40 mph	HDM § 2.7.5.3.A
2	Travel Lane Width (Min.)	12 ft. (1 lane) R>600', Tangent (4) 15 ft. R=300' to 599'	varies	12 ft. (1 lane) R>1000' 15' to 16' R=300' to 999'	HDM § 2.7.5.3.B Exhibit 2.9
3	Shoulder Width (Min.) Right Left	6 ft. 4 ft.	1ft & Varies*	6 ft. 4 ft.	HDM § 2.7.5.3.C Exhibit 2-10a
4	Grade (Max.)	6%	6%	6%	HDM § 2.7.5.3.G Exhibit 2-10a
5	Horizontal Curve Radius (Min. Radius)	444 ft. @ 8%	> 444 ft.	444 ft. @ 8%	HDM § 2.7.5.3.D Exhibit 2-10a
6	Superelevation	8%	8% Max.	8%	HDM § 2.7.5.3.E
7	Stopping Sight Distance (Min.)	305 ft.	160 ft. & Varies*	305 ft.	HDM § 2.7.5.3.F Exhibit 2-10a
8	Vertical Clearance	16 ft. Min. (5, 6) 16.5 ft. Desired	16 ft. Min.	16.5 ft. Min. (5, 6)	HDM § 2.7.5.3.I / NYSDOT Brg. Man. § 2.3.1 Table 2-2
9	Cross Slope (Pavement) (Min.) / (Max.)	1.5% min, 2.5% max	1.5% / 2.0%	1.5% min, 2.5% max	HDM § 2.7.5.3.H
10	Design Loading Structural Capacity	NYSDOT Bridge Manual, Section 2.5	HS-20	NYSDOT Bridge Manual, Section 2.5	NYSDOT Bridge Manual, Section 2.5
11	Americans with Disabilities (ADA Compliance)	Comply with PROWAG and HDM Chapter 18 (7)	At Ramp Terminal	Complies w/PROWAG and HDM Chapter 18 (7)	HDM § 2.7.5.3.K

#### \* Nonstandard feature

#### Note

- 1. Table applies to all diagonal ramps where the mainline design speed= 70 mph.
- 2. Ramps to be designed with provision for passing a WB-67 stalled vehicle (Case IIC).
- 3. The Regional Traffic Engineer has concurred that the use of a Design Speed of 40 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.
- 4. Lane width based on deducting right and left shoulder widths from the Exhibit 2-9 Traveled Way Width, Case IIC, and applying the minimum Case I lane width. Per Exhibit 2-9, where the stabilized shoulder width on one side is 4 ft. or greater, a 12-foot lane width may be used on tangents (radius greater than or equal to 600 ft.)
- 5. Existing I-481 and new I-81 are the designated 16-ft route.
- 6. The minimum vertical clearance for sign structures and pedestrian bridges shall be 1-ft greater.
- 7. At Ramp Terminal only.

### TABLE 6

	DESIGN CRITERIA	FOR URBAN MINOR ARTERIAL			
PIN	<b>1</b> :	3501.91		NHS (Y/N):	No
Rou	ate No. & Name:	E. Brighton Ave., E. Seneca Tpke. to I-81 (approximate STA. S4D 109+00).		Functional Classification:	Urban Minor Arterial
Pro	ject Type:	Reconstruction		Design Classification:	Urban Arterial
% T	'rucks:	3%		Terrain:	Rolling
AD'	Γ (2050):	Varies		Truck Access/Qualifying:	Neither
	DESIGN ELEMENT	STANDARD CRITERIA	EXISTING CONDITION	PROPOSED CONDITION	REFERENCE
1	Design Speed (Min.)	35 mph (1)	Posted 30 mph	35 mph	HDM § 2.7.2.3.A
2	Lane Width Shared Lane Width Turn Lane Width Bike Lane (4)	11 ft. min., 12 ft. desirable 13 ft. min. 11 ft. min., 12 ft. desirable 5 ft. min.	Varies	12 ft. N/A (2) 12 ft. Varies 6 ft. & 10 ft. min.(3,4)	HDM § 2.7.2.3.B Exhibit 2-4 HDM Chapter 17
3	Shoulder Width (Min.)	0-4 ft. (5)	1 ft. curb offset	2 ft. curb offset (6)	HDM § 2.7.2.3.C Exhibit 2-4
4	Grade (Max.)	8.0%	8%	6.97 %	HDM § 2.7.2.3.G Exhibit 2-4
5	Horizontal Curve Radius (Min. Radius)	263 ft.	Varies *	>263 ft.	HDM § 2.7.2.3.D Exhibit 2-4
6	Superelevation	4.0%	4.0%	4.0%	HDM § 2.7.2.3.E
7	Stopping Sight Distance (Min.)	220 ft.	Varies*	> 220 ft.	HDM § 2.7.2.3.F Exhibit 2-4
8	Vertical Clearance	14 ft. Min. (7) 14.5 ft. Desired	14 ft. (Min.)	14.5 ft. Min. (7)	HDM § 2.7.2.3.I/ NYSDOT Brg. Man. § 2.3.1
9	Cross Slope (Pavement) (Min.) / (Max.)	1.5% min, 3.0% max	2.0%	1.5% min, 3.0% max	HDM § 2.7.2.3.H
10	Design Loading Structural Capacity	NYSDOT Bridge Manual, Section 2.5	HS-20	NYSDOT Bridge Manual, Section 2.5	NYSDOT Bridge Manual, Section 2.5
11	Americans with Disabilities (ADA Compliance)	Comply with PROWAG and HDM Chapter 18	Varies	Complies with PROWAG and HDM Chapter 18	HDM § 2.7.2.3.K

### \* Nonstandard feature

- 1. The Regional Traffic Engineer has concurred that the use of a Design Speed of 35 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.
- 2. Shared travel lanes not provided on Brighton Ave. as there is a separate designated bicyclefacilities.
- 3. A 3 ft. buffer is required between the bike lanes and the adjacent travel lane.
- 4. The minimum northbound bike lane width is 6 ft. and the minimum southbound bike lane width is 10 ft.
- 5. A 0-4 ft. shoulder may be used in locations where a separate bicycle facility is provided or where the lane width is a minimum of 13 feet.
- 6. A 2 ft. curb offset is required adjacent to both travel lanes and bike lanes.
- 7. The minimum vertical clearance for sign structures and pedestrian bridges shall be 1-ft greater.

#### TABLE 7

PIN	<b>[:</b>	3501.91		NHS (Y/N):	Yes
Route No. & Name:		East Brighton Ave., I-81 (approximate STA. S4D 109+00) to Ainsley Drive.		Functional Classification:	Urban Principal Arterial – Other
Proj	ect Type:	Reconstruction		Design Classification:	Urban Arterial
% <b>T</b>	rucks:	3%		Terrain:	Rolling
AD'	Г (2050):	Varies		Truck Access/Qualifying:	Neither
	DESIGN ELEMENT	STANDARD CRITERIA	EXISTING CONDITION	PROPOSED CONDITION	REFERENCE
1	Design Speed (Min.)	35 mph (1)	Posted 30 mph	35 mph	HDM § 2.7.2.4.A
2	Lane Width Turn Lane Width (2-lane) Shared Lane Width Bike Lane Width	11 ft. min., 12 ft. desirable 11 ft. min., 12 ft. desirable 13 ft. min. 5 ft. min	11ft. and varies 11ft. and varies N/A N/A	12 ft. min. 11 ft. min. (2) N/A (3) Varies 6 ft. & 10 ft. min. (4, 5)	HDM § 2.7.2.4.B Exhibit 2-4a
3	Shoulder Width (Min.)	0-4 ft. (6)	1 ft. Curb Offset	Varies 0-2 ft. Curb Offset (7)	HDM § 2.7.2.4.C Exhibit 2-4a
4	Grade (Max.)	8.0%	8%	8.0%	HDM § 2.7.2.4.G Exhibit 2-4a
5	Horizontal Curve Radius (Min. Radius)	371 ft.	>371 ft.	>371 ft.	HDM § 2.7.2.4.D Exhibit 2-4a
6	Superelevation	4.0%	4.0%	4.0%	HDM § 2.7.2.4.E
7	Stopping Sight Distance (Min.)	250 ft.	>250 ft.	>250 ft.	HDM § 2.7.2.4.F Exhibit 2-4a
8	Vertical Clearance	Varies 14 Min. (8, 9) Varies 14.5 Desired	Varies 14 - 16 ft. Min.	14.5 ft. Min. (8, 9)	HDM § 2.7.2.4.I / NYSDOT Brg. Man § 2.3.1
9	Cross Slope (Pavement) (Min.) / (Max.)	1.5% min, 2.5% max	2.0%	1.5% min, 2.5% max	HDM § 2.7.2.4.H
10	Design Loading Structural Capacity	NYSDOT Bridge Manual, Section 2.5	HS-20	NYSDOT Bridge Manual, Section 2.5	NYSDOT Bridge Manual, Section 2.5
11	Americans with Disabilities (ADA Compliance)	Comply with PROWAG and HDM Chapter 18	Varies	Complies with PROWAG and HDM Chapter 18	HDM § 2.7.2.4.K

<sup>\*</sup> Nonstandard feature

- The Regional Traffic Engineer has concurred that the use of a Design Speed of 35 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.
- Applies to the dual northbound turn lane at the Brighton Ave./Relocated East Glen Ave. intersection.
- 3. Shared travel lanes not provided on Brighton Ave. as there is a separate designated bicyclefacilities.
- 4. A 3 ft. buffer is required between the bike lanes and the adjacent travel lane.
  5. The minimum northbound bike lane width is 6 ft. and the minimum southbound bike lane width is 10 ft.
- 6. A 0-4 ft. shoulder may be used in locations where a separate bicycle facility is provided or where the lane width is a minimum of 13 feet.
- 7. A 2 ft. curb offset is required adjacent to travel lanes. A minimum 2 ft. offset is required between a bike lane and any barrier or guiderail and a 0 ft. curb offset is required adjacent to a bike lane where no barrier or guiderail is present.
- 8. 16-ft clearance exemption. Existing I-481 (Viaduct Alternative) and new I-81 (Community Grid Alternative) are the designated 16-ft route.
- The minimum vertical clearance for sign structures and pedestrian bridges shall be 1-ft greater.

### **TABLE 8**

					IADLE
	DESIGN CRITER	IA, URBAN PRINCIPAL ART	ERIAL OTHER		
PIN	<b>Ι:</b>	3501.91		NHS (Y/N):	Yes
Rou	ite No. & Name:	Relocated E. Glen Avenue	_	Functional Classification:	Urban Principal Arterial - Other
Pro	iect Type:	Reconstruction		Design Classification:	Urban Arterial
% <b>T</b>	rucks:	3%		Terrain:	Rolling
AD'	Γ (2050):	13,200		Truck Access/Qualifying:	Truck Access
	DESIGN ELEMENT	STANDARD CRITERIA	EXISTING CONDITION	PROPOSED CONDITION	REFERENCE
1	Design Speed (Min.)	35 mph (1)	Posted 30 mph	35 mph	HDM § 2.7.2.4.A
2	Lane Width Inside Shared Lane Width Turn Lane Width	11 ft. min., 12 ft. desirable 13 ft. min. 11 ft. min., 12 ft. desirable	11ft and varies N/A 11ft and varies	12 ft. N/A (2) 12 ft.	HDM § 2.7.2.4.B Exhibit 2-4a
3	Shoulder Width (Min.)	6 ft. (3)	Varies 0-4 ft. Curb Offset	6 ft. (3)	HDM § 2.7.2.4.C Exhibit 2-4
4	Grade (Max.)	8.0%	8%	8.0%	HDM § 2.7.2.4.G Exhibit 2-4a
5	Horizontal Curve Radius (Min. Radius)	371 ft.	>371 ft.	>371 ft.	HDM § 2.7.2.4.D Exhibit 2-4a
6	Superelevation	4.0%	4.0%	4.0%	HDM § 2.7.2.4.E
7	Stopping Sight Distance (Min.)	250 ft.	>250 ft.	>250 ft.	HDM § 2.7.2.4.F Exhibit 2-4a
8	Vertical Clearance	Varies 14 Min. (4,5) Varies 14.5 Desired	Varies 14 - 16 ft. Min.	14.5 ft. Min. (4,5)	HDM § 2.7.2.4.I , NYSDOT Brg. Man. § 2.3.1
9	Cross Slope (Pavement) (Min.) / (Max.)	1.5% min, 2.5% max	2.0%	1.5% min, 2.5% max	HDM § 2.7.2.4.H
10	Design Loading Structural Capacity	NYSDOT Bridge Manual, Section 2.5	HS-20	NYSDOT Bridge Manual, Section 2.5	NYSDOT Bridge Manual, Section 2
11	Americans with Disabilities (ADA Compliance)	Comply with PROWAG and HDM Chapter 18	Varies	Complies with PROWAG and HDM Chapter 18	HDM § 2.7.2.4.K

#### \* Nonstandard feature

- 1. The Regional Traffic Engineer has concurred that the use of a Design Speed of 35 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.
- 2. Shared travel lanes not provided on relocated East Glen Ave. as there is a separate designated bicycle facilities.
- 3. 6 ft. shoulder width to provide for breakdowns and turning movements.
- 4. 16-ft clearance exemption. New I-81 is the designated 16-ft route.
- 5. The minimum vertical clearance for sign structures and pedestrian bridges shall be 1-ft greater.

# TABLE 9

	DESIGN CRITERIA	A FOR URBAN MINOR ARTERIAL			
PIN	J:	3501.91		NHS (Y/N):	No
Route No. & Name:		Rock Cut Road		Functional Classification:	Urban Major Collector
Pro	ject Type:	Reconstruction		Design Classification:	Urban Collector
% Т	rucks:	14%		Terrain:	Rolling
ΑD	Г (2050):	>10,000		Truck Access/Qualifying:	Neither
	DESIGN ELEMENT	STANDARD CRITERIA	EXISTING CONDITION	PROPOSED CONDITION	REFERENCE
1	Design Speed (Min.)	35 mph (1)	Posted 30 mph	35 mph	HDM § 2.7.3.3.A
2	Lane Width Shared Lane Width Turn Lane Width	10 ft. min., 12 ft. desirable 13 ft. min. 11 ft. min., 12 ft. desirable	Varies 12 ft. to 15 ft.	Varies 12 to 15 ft. 13 ft. 12 ft.	HDM § 2.7.3.3.B Exhibit 2-6 HDM Chapter 17
3	Shoulder Width (Min.)	0-4 ft. (2)	1 ft. curb offset	1-2 ft. curb offset (3)	HDM § 2.7.3.3.0 Exhibit 2-6
4	Grade (Max.)	10.0%	<10 %	<10 %	HDM § 2.7.3.3.G Exhibit 2-6
5	Horizontal Curve Radius (Min. Radius)	252 ft. @ e=4%	>252 ft.	>252 ft.	HDM § 2.7.3.3.D Exhibit 2-6
6	Superelevation	4.0%	4.0%	4.0%	HDM § 2.7.3.3.E
7	Stopping Sight Distance (Min.)	220 ft.	>220 ft.	>220 ft.	HDM § 2.7.3.3.F Exhibit 2-6
8	Vertical Clearance	14 ft. Min. (4) 14.5 ft. Desired	14 ft. (Min.)	14.5 ft. Min. (4)	HDM § 2.7.3.3.I/ NYSDOT Brg. Man. § 2.3.1
9	Cross Slope (Pavement) (Min.) / (Max.)	1.5% min, 3.0% max	2.0%	1.5% min, 3.0% max	HDM § 2.7.3.3.H
10	Design Loading Structural Capacity	NYSDOT Bridge Manual, Section 2.5	HS-20	NYSDOT Bridge Manual, Section 2.5	NYSDOT Bridge Manual, Section 2.
11	Americans with Disabilities (ADA Compliance)	Comply with PROWAG and HDM Chapter 18	Varies	Complies with PROWAG and HDM Chapter 18	HDM § 2.7.3.3.K

<sup>\*</sup> Nonstandard feature

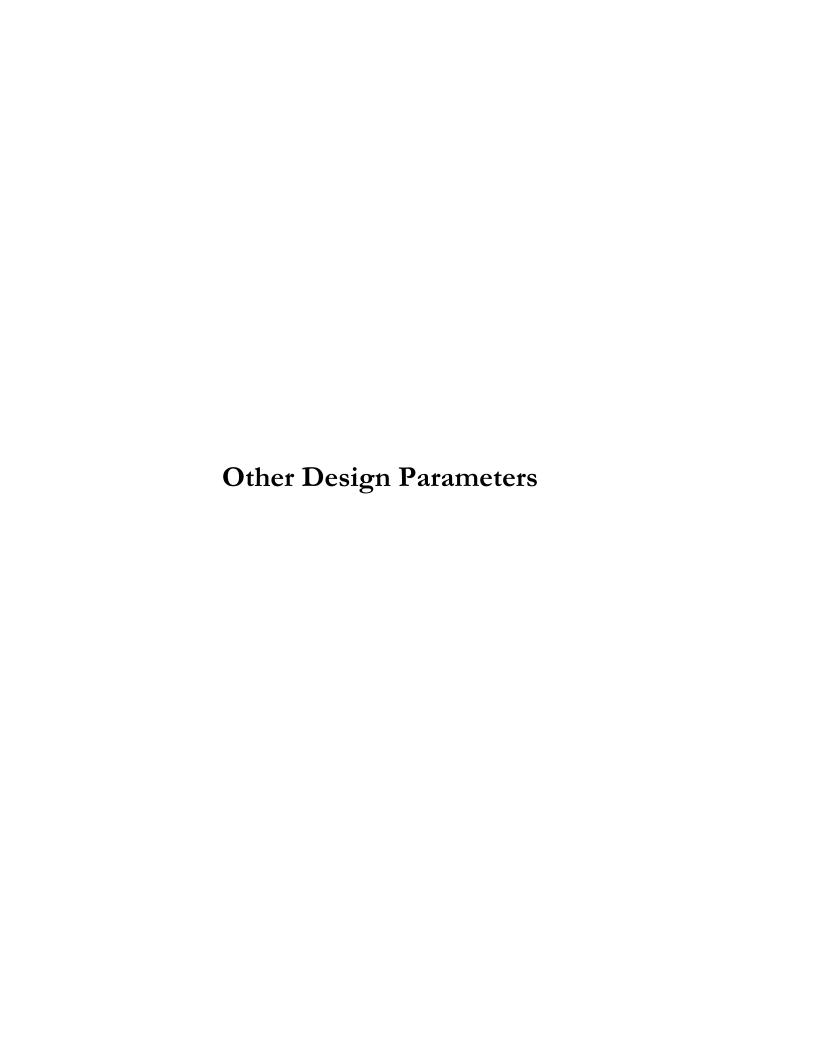
- 1. The Regional Traffic Engineer has concurred that the use of a Design Speed of 35 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.
- 2. A 0-4 ft. shoulder may be used in locations where a separate bicycle facility is provided or where the lane width is a minimum of 13 feet.
- 3. A 1 ft. curb offset applies to the westbound lane and a 2 ft. curb offset applies to the eastbound lane.
- 4. The minimum vertical clearance for sign structures and pedestrian bridges shall be 1-ft greater.

# TABLE 10

DIT		2504.04		NITTO OL (ND	37		
PIN:  Route No. & Name:  Project Type:  % Trucks:		3501.91		NHS (Y/N):	Yes		
		Rt 5/92, Erie Blvd East to Lyndon Rd. Rt 92, Lyndon Rd. to Britain Rd.		Functional Classification:	Urban Principal Arterial – Other		
		Reconstruction		Design Classification:	Urban Arterial		
		3%		Terrain:	Rolling		
AD	Γ (2050):	Varies		Truck Access/Qualifying:	Neither		
	DESIGN ELEMENT	STANDARD CRITERIA	EXISTING CONDITION	PROPOSED CONDITION	REFERENCE		
1	Design Speed (Min.)	35 mph (1)	Posted 30 mph	35 mph	HDM § 2.7.2.4.A		
2	Lane Width Turn Lane Width Shared Lane Width	11 ft. min., 12 ft. desirable 11 ft. min., 12 ft. desirable 13 ft. min.	11ft. and varies	Varies 11 ft. – 15 ft. Varies 11 ft. – 12 ft. 13 ft.	HDM § 2.7.2.4.B Exhibit 2-4a		
3	Shoulder Width (no cyclist) Shoulder Width (cyclist)	0-4 ft. (2) 4-5 ft.	Varies 0 to 8 ft.	Varies 0 to 8 ft. (3) Varies 5 to 8 ft. (4)	HDM § 2.7.2.4.C Exhibit 2-4a		
4	Grade (Max.)	8.0%	8%	8.0%	HDM § 2.7.2.4.G Exhibit 2-4a		
5	Horizontal Curve Radius (Min. Radius)	371 ft. @ e=4%	>371 ft.	>371 ft.	HDM § 2.7.2.4.D Exhibit 2-4a		
6	Superelevation	4.0%	4.0%	4.0%	HDM § 2.7.2.4.E		
7	Stopping Sight Distance (Min.)	250 ft.	>250 ft.	>250 ft.	HDM § 2.7.2.4.F Exhibit 2-4a		
8	Vertical Clearance	Varies 14 Min. (5, 6) Varies 14.5 Desired	Varies 14 - 16 ft. Min.	14.5 ft. Min. (5, 6)	HDM § 2.7.2.4.I / NYSDOT Brg. Man. § 2.3.1		
9	Cross Slope (Pavement) (Min.) / (Max.)	1.5% min, 2.5% max	2.0%	1.5% min, 2.5% max	HDM § 2.7.2.4.H		
10	Design Loading Structural Capacity	NYSDOT Bridge Manual, Section 2.5	HS-20	NYSDOT Bridge Manual, Section 2.5	NYSDOT Bridge Manual, Section 2.5		
11	Americans with Disabilities (ADA Compliance)	Comply with PROWAG and HDM Chapter 18	Varies	Complies with PROWAG and HDM Chapter 18	HDM § 2.7.2.4.K		

<sup>\*</sup> Nonstandard feature

- 1. The Regional Traffic Engineer has concurred that the use of a Design Speed of 35 mph is consistent with the anticipated off-peak 85th percentile speed within the range of functional class speeds for the terrain and volume.
- 2. A 0-4 ft. shoulder may be used in locations where a separate bicycle facility is provided or where the lane width is a minimum of 13 feet.
- 3. Shoulder width 0 ft. min when curbed and adjacent to a shared lane.
- 4. Shoulder width varies 5 ft to 8 ft to accommodate cyclists when adjacent to a 12 ft travel lane and is curbed. Shoulder width varies 5 ft to 8 ft. to accommodates cyclists when adjacent to a 12 ft travel lane and where there is no curb.
- 5. 16-ft clearance exemption. New I-81 is the designated 16-ft route.
- 6. The minimum vertical clearance for sign structures and pedestrian bridges shall be 1-ft greater.



In addition to the 11 critical design elements described above, other design parameters established by NYSDOT and AASHTO that are typically used during the design of highway and bridge projects include the type of the design vehicle; the Level of Service (LOS) to be provided, which identifies the ease with which traffic can move along the roadways; the intensity of rainfall for design of storm drainage facilities; and the length of speed change lanes both during acceleration and deceleration. **Table 9** lists other highway design parameters used to develop the project design and **Table 10** lists the design vehicles used.

Table 9
Other Design Parameters: Highway or Feature

	Element	Criteria	Proposed Condition
4	Level of Service	<b>D</b> (min.) <sup>1</sup>	<b>D</b> (min.) <sup>1</sup>
1		C (desirable)	C (or better) desirable
	Storm Drainage System Design Storm		
	<ul> <li>Interstate and Other Freeways</li> </ul>	10 yr. <sup>(2)</sup>	10 yr. <sup>(2)</sup>
	Principal Arterials	10 yr. <sup>(2)</sup>	10 yr. <sup>(2)</sup>
	<ul> <li>Local Roads and Streets</li> </ul>	5 yr. <sup>(3)</sup>	5 yr. <sup>(3)</sup>
	<ul> <li>Separated Storm Sewer Trunk Line</li> </ul>	10 yr.	50 yr.
2	Culvert Design Storm		
	<ul> <li>Interstates, Arterials, Streets</li> </ul>	50 yr. <sup>(4)</sup>	50 yr. <sup>(4)</sup>
	Driveway Culverts	10 yr.	10 yr.
	Ditch Design Storm		
	<ul> <li>Interstate and Other Freeways</li> </ul>	25 yr. <sup>(5)</sup>	25 yr. <sup>(5)</sup>
	Principal Arterials	25 yr. <sup>(5)</sup>	25 yr. <sup>(5)</sup>
	Local Roads and Streets	10 yr. <sup>(5)</sup>	10 yr. <sup>(5)</sup>
3	Freeboard	2 ft. for the 50-year design flood	2 ft. for the 50-year design flood
	n Civi		
	Ramp Criteria	Greater than or equal to minimum	Greater than or equal to minimum length in
	Deceleration Length	length in AASHTO Table 10-5.	AASHTO Table 10-5.
	Acceleration Length	Greater than or equal to minimum	Greater than or equal to minimum length in
4		length in AASHTO Table 10-3	AASHTO Table 10-3.
	Ramp Spacing <sup>(6)</sup>		
	■ EN to EN or EX to EX	Greater than or equal to 1000 ft.	Greater than or equal to 1000 ft.
	■ EN to EX (System to Service)	Greater than or equal to 2000 ft.	Greater than or equal to 2000 ft.
	■ EN to EX (Service to Service)	Greater than or equal to 1600 ft.	Greater than or equal to 1600 ft.
	Bridge Roadway Width		
5	Lane and shoulder widths	Same as approach roadway	Same as approach roadway
	Horizontal Clearance	THE STATE OF THE S	
	Interstate and other Freeways		
	o without barrier	15 ft.	15 ft.
	o with barrier	Shld. width or 4 ft. Min.	Shld. width or 4 ft. Min.
	Interstate and Freeway Ramps	15 ft.	15 ft.
6	o without barrier o with barrier	Shld. width or 4 ft. Min.	Shld. width or 4 ft. Min.
	Urban Arterials (curbed), Urban		
	Collectors (curbed) and Local Urban		
	Streets (curbed)	1.5 ft., 3 ft. at intersections	
	o without barrier	0 ft.	1.5 ft., 3 ft. at intersections 0 ft.
	o with barrier	UIL.	

Table 9
Other Design Parameters: Highway or Feature

	Element	Criteria	Proposed Condition
7	Rollover Between Lanes At Edge of Traveled Way	4 % Max. 8% Max.	4 % Max. 8% Max.
8	Control of Access  Interstate and other Freeways Interstate and Freeway Ramps Urban Arterials (curbed), Urban Collectors (curbed) and Local Urban Streets (curbed)	Full Full Uncontrolled	Full Full Uncontrolled
9	Median Width  Interstate and other Freeways	10 ft.	10 ft.

#### Notes:

- 1. In heavily developed sections of metropolitan areas, conditions may necessitate a minimum LOS of D.
- 2. A 50-year frequency shall be used for design at the following locations where no overflow relief is available:
  - a. A sag vertical curves connecting negative and positive grades.
  - b. Other locations such as underpasses, depressed roadways, etc.
- 3. A 25-year frequency shall be used for design at the following locations where no overflow relief is available:
  - a. A sag vertical curves connecting negative and positive grades.
  - b. Other locations such as underpasses, depressed roadways, etc.
- 4. The check flow, used to assess the performance of the facility, should be the 100-year storm event.
- 5. Including lining material.
- 6. Refer to AASHTO Policy on Geometric Design of Highways & Streets, Figure 10-68. EN = Entrance Ramp, EX = Exit Ramp

Table 10 Other Design Parameters: Design Vehicle

Location	Design Vehicle	Vehicle Accommodated	
I-81, including ramps	WB-67 (1,2)	WB-67 (1,2)	
I-690, including ramps	WB-67 (1,2)	WB-67 (1,2)	
BL 81, including ramps	WB-67 (1,2)	WB-67 (1,2)	
Rock Cut Rd/Brighton Ave intersection Existing East Glen Ave/Brighton Ave. intersection Relocated East Glen/Brighton Ave. intersection RT 5/92 (Lyndon Corners) intersection	WB-67 (2,3,4)	WB-67 (2,3,4)	

- 1. For ramps, HDM Exhibit 2-9, Case II, Condition C applies, except for longer vehicles (larger than WB-62) where minimum width can be determined using Case I widths.
- 2. Design Vehicle criteria applies to the portions of the roadway corridor that is slated to be reconstructed.
- 3. Where necessary minor encroachment into the adjacent (same direction) lane to accommodate the design vehicle was allowed to facilitate movement.
- 4. An S-BUS-40 design vehicle is required along the portion of the roadway designated as a city bus route.

**Table 11** lists the primary design values for a paved shared-use path, and **Table C-12** lists the primary design values for raised cycle tracks.

Table 11 Primary Design Values for Paved Shared-Use Path

Element	Standard Value	Source (1)	Proposed Value	
Design Speed	20 mph	AASHTO	20 mph	
Shared-Use Width	10 ft. min.	AASHTO	10 ft. min.	
Adjacent Graded Width	2 ft. min.	AASHTO	2 ft. min.	
Adjacent Graded Slope	1:6 max. cross slope	AASHTO	1:6 max. cross slope	
Maximum Grade	5% max. desired, 8% max. for short distances or match grade of adjacent roadway (2)	AASHTO	5% max.	
Cross Slope	2% max.	HDM Chapter 18	2% max.	
Horizontal Curvature	74 ft. min.	AASHTO	74 ft. min.	
Stopping Sight Distance (2)	195 ft. min.	AASHTO	195 ft. min.	
Horizontal Sightline Offset (3)	56 ft. min.	AASHTO	56 ft. min.	
Crest Vertical Curve Length (4)	425 ft. min.	25 ft. min. AASHTO		
Horizontal Clearance	2 ft. min.	AASHTO	2 ft. min.	
Vertical Clearance	10 ft. min. (5)	AASHTO	10 ft. min. (5)	
Bridge Path Width	12 ft. min. clear width	BM, Table 2-1	12 ft. min.	
Separation from Roadways	5 ft. min. from face of curb or edge of shoulder	AASHTO	5 ft. min.	

- 1) 2012 AASHTO Guide for the Development of Bicycle Facilities.
- 2) Based on 5% Grade.
- 3) Based on maximum curve radius.
- 4) Based on 10% grade differential.
- 5) Per NYSDOT Bridge Manual, 12 ft. is preferred and 13 ft. where emergency/maintenance access is required.

Table 12 Primary Design Values for Raised Cycle Tracks

I filliary Design values for Raised Cycle			
Element	Standard Value	Source (1)	Proposed Value
One Way Width	6.5 ft. min.	NACTO	10.0 ft. min. (2)
Vertical Separation from Roadway	1-inch min. 6 inches max.	I NACTO I	
Vertical Separation from Sidewalk	0-inch min. 5 inches max.	NACTO	0 inches
Maximum Grade	5% max. or match grade of adjacent roadway	AASHTO	5% max. or match grade of adjacent roadway
Cross Slope	2% max.	NACTO	2% max.
Buffer to parallel parking lane	3 ft. min.	NACTO	3 ft. min.
Buffer to drive lane with fixed objects	3 ft. min.	NACTO	3 ft. min.
~ -			

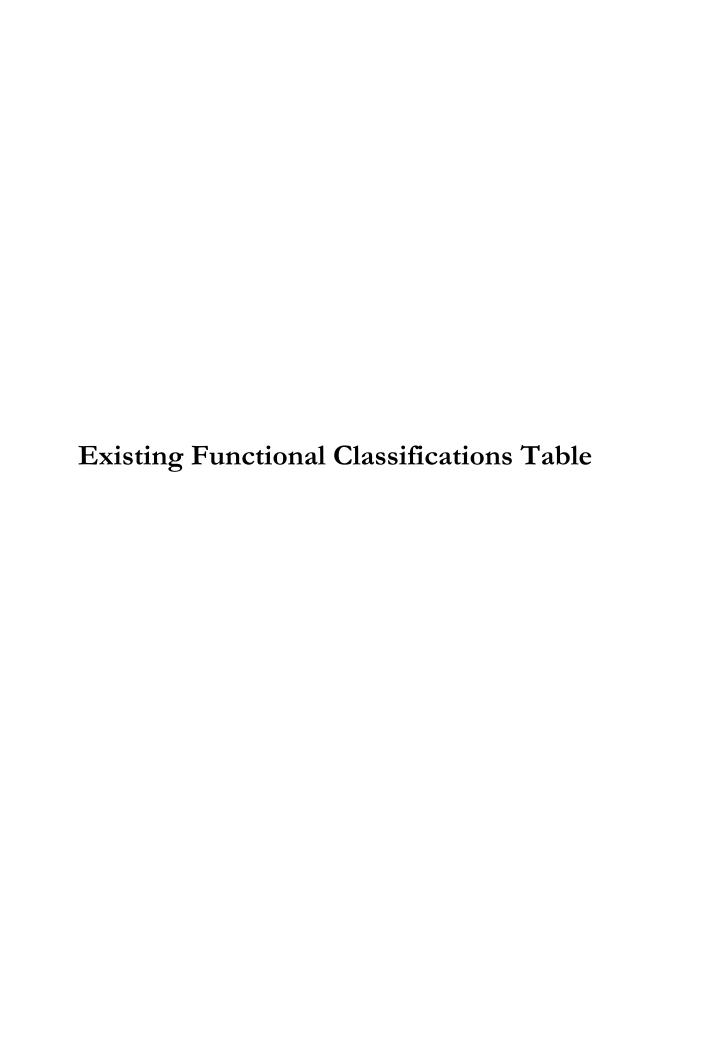
### Notes:

- 1) National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide, second edition. AASHTO Guide for the Development of Bicycle Facilities.
- 2) 10 ft. typical for the southbound cycle track along Brighton Avenue.

Table 13 lists other design parameters for railroad related elements of work.

Table 13
Other Design Parameters: Railroad Facilities

	8				
	Element	Criteria	Proposed Condition		
CSX Railroad	Horizontal Clearance: With off-track roadway Without off-track roadway Vertical Clearance	28 ft. (20 ft. with crash wall) 20 ft. (12 ft. with crash wall) 22 ft. min from top of rail 23 ft. recommended	28 ft. (20 ft. with crash wall) 20 ft. (12 ft. with crash wall) 23 ft. min from top of rail		



# Appendix C-6.5

# **Existing Functional Classifications**

The following table provides the Functional Classification for all highways and streets within the Project Area.

Table 14 Existing Functional Classifications

Route(s)	Functional Classification	National Highway System (NHS)	Designated Truck Access Highway	Qualifying Highway	Within 1 mile of a Qualifying Highway	Within the 16 ft. vertical clearance network
Interstate 81-south of I-481 & north of I-90	Urban Principle Arterial- Interstate	Yes	No	Yes	Yes	Yes
Interstate 81-north of I-481 & south of I-90	Urban Principle Arterial- Interstate	Yes	No	Yes	Yes	No (1)
Interstate 690	Urban Principle Arterial- Interstate	Yes	No	Yes	Yes	No (2)
Interstate 481	Urban Principle Arterial- Interstate	Yes	No	Yes	Yes	Yes
W. Genesee Street (Rt 5/92)	Urban Principal Arterial-Other	Yes	No	No	Yes	No
Highbridge Rd (Rt 92)	Urban Principal Arterial-Other	Yes	No	No	Yes	No
East Brighton Ave, south of I-481	Urban Minor Arterial	No	No	No	Yes	No
East Brighton Ave, north of I-481	Urban Principal Arterial-Other	Yes	No	No	Yes	No

## Notes:

**Sources:** Official Description of Designated Qualifying and Access Highway in New York State 04/2016, NYSDOT Online Functional Class Viewer (see **Figure C-6.5-1**)

<sup>1) 16</sup> ft clearance exemption, I-481 is the designated 16-foot clearance route.

<sup>2)</sup> I-90 is the designated 16-foot clearance route.

Existing Ownership and Maintenance Jurisdiction

# Existing Ownership and Maintenance Jurisdiction

The following table (Table 15) shows the existing ownership and maintenance of the roads, highways, bridges, and lighting within the Project Area.

Table 15 Ownership and Maintenance Jurisdiction

Highway	Limits	Feature(s) being Maintained	Maintaining Agency	Owned By (1)	
I-81 (NB & SB)	I-81 (NB & SB)  Seneca Turnpike to S.  Bay Road  Highway, Bridges & Ramps  NYSDC		NYSDOT	NYSDOT	
Project-wide	Project-wide Project-wide Lighting City of Syracus		City of Syracuse	NYSDOT	
I-690 (EB & WB)	Leavenworth Ave. to Beech St.	1 8 77 8 1 NYSDOT		NYSDOT	
I-481 (NB & SB)	Southern I-81 Interchange to Northern I-81 Interchange	Highway, Bridges & Ramps	NYSDOT	NYSDOT	

# **Staging Area Plans**









